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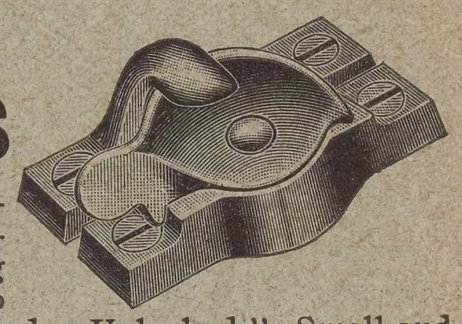

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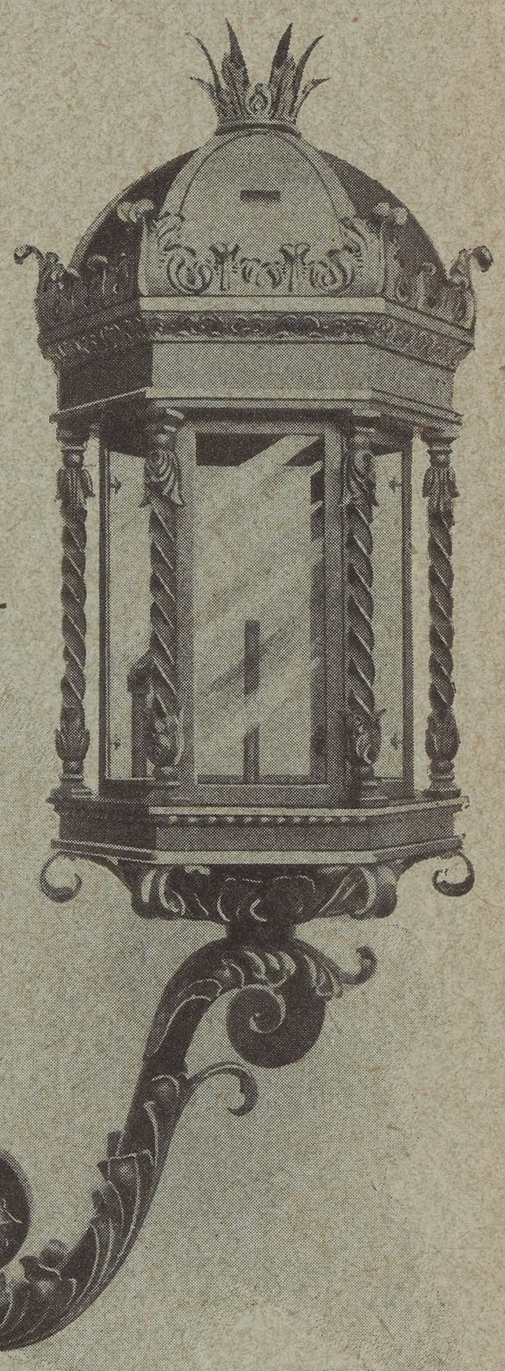

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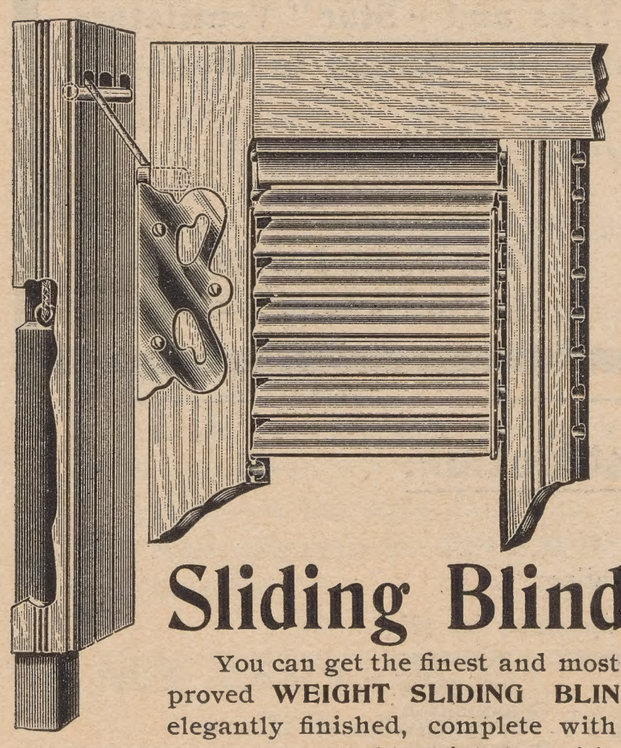

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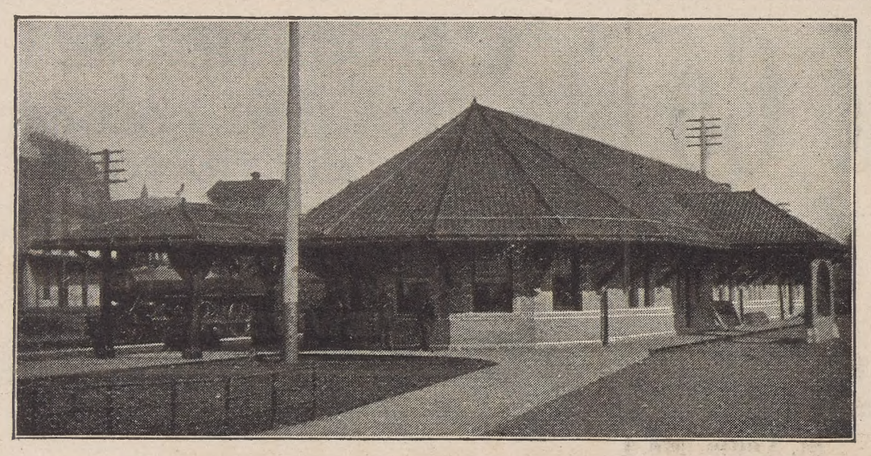

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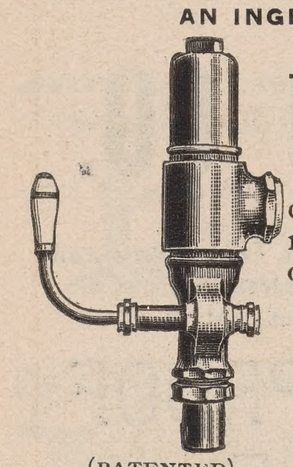

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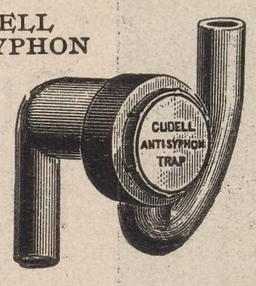

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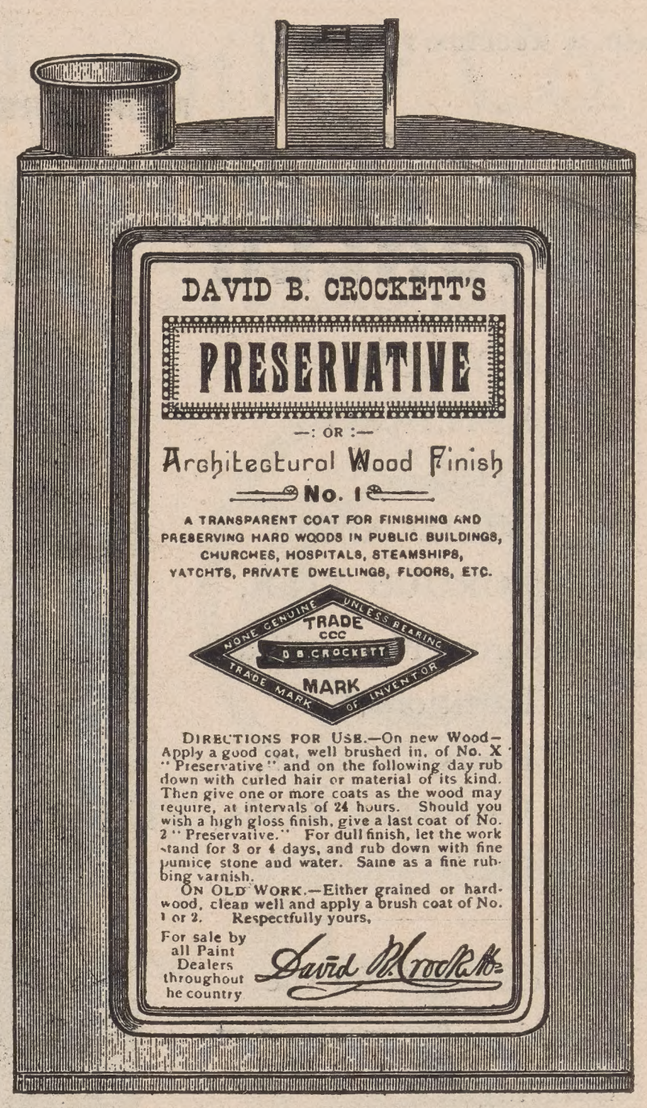
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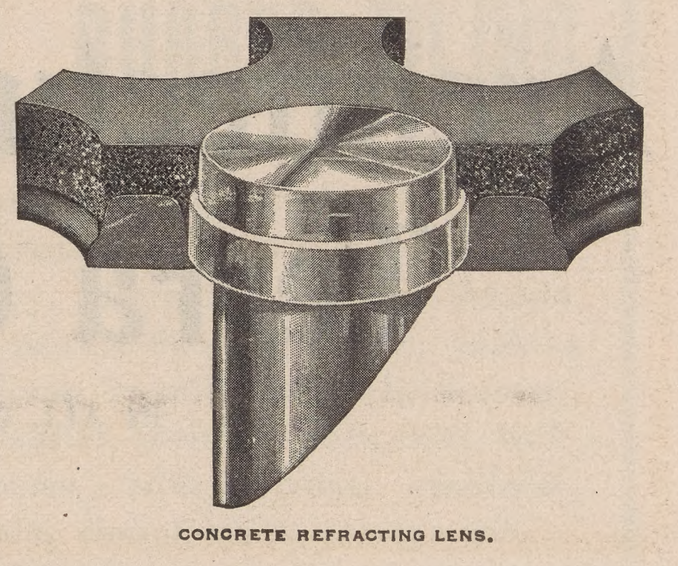

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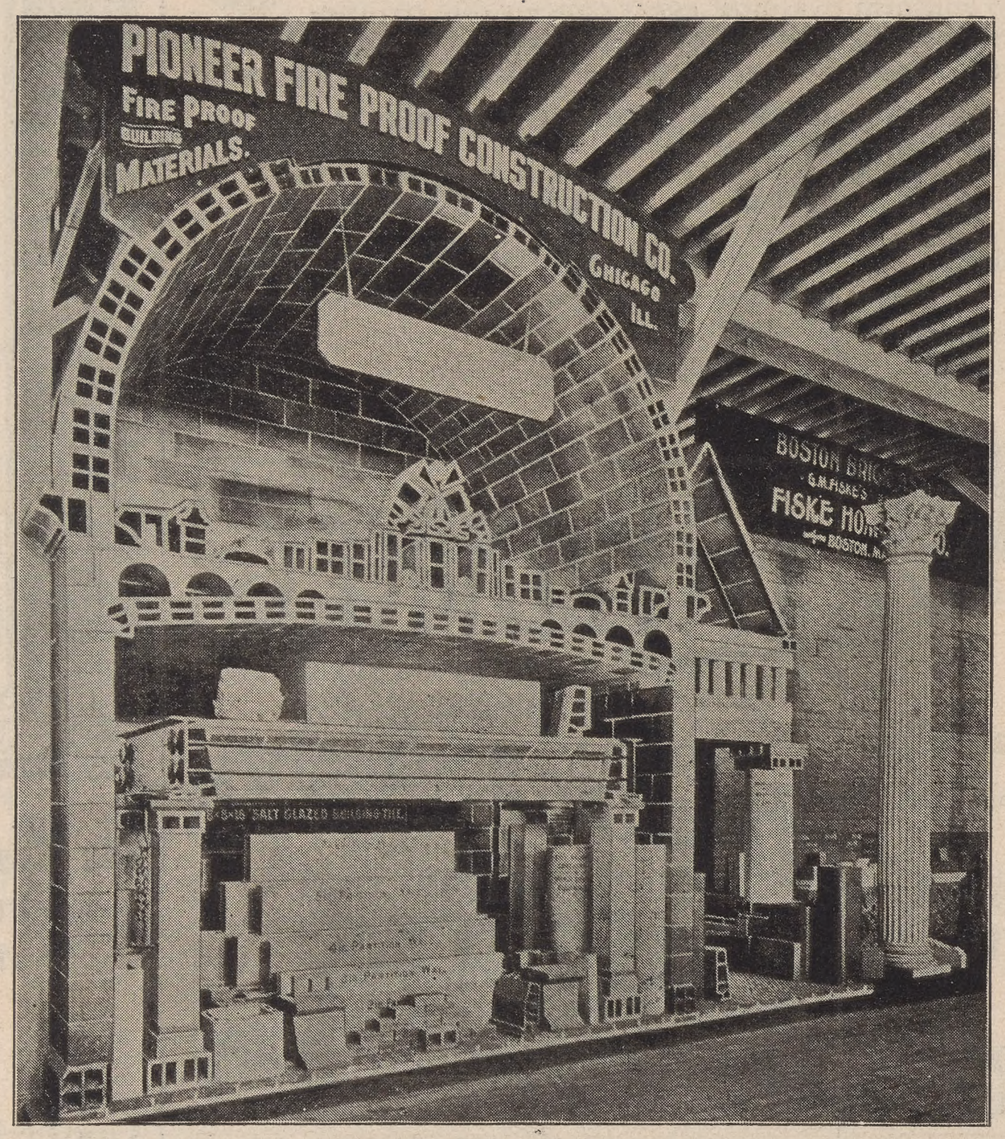

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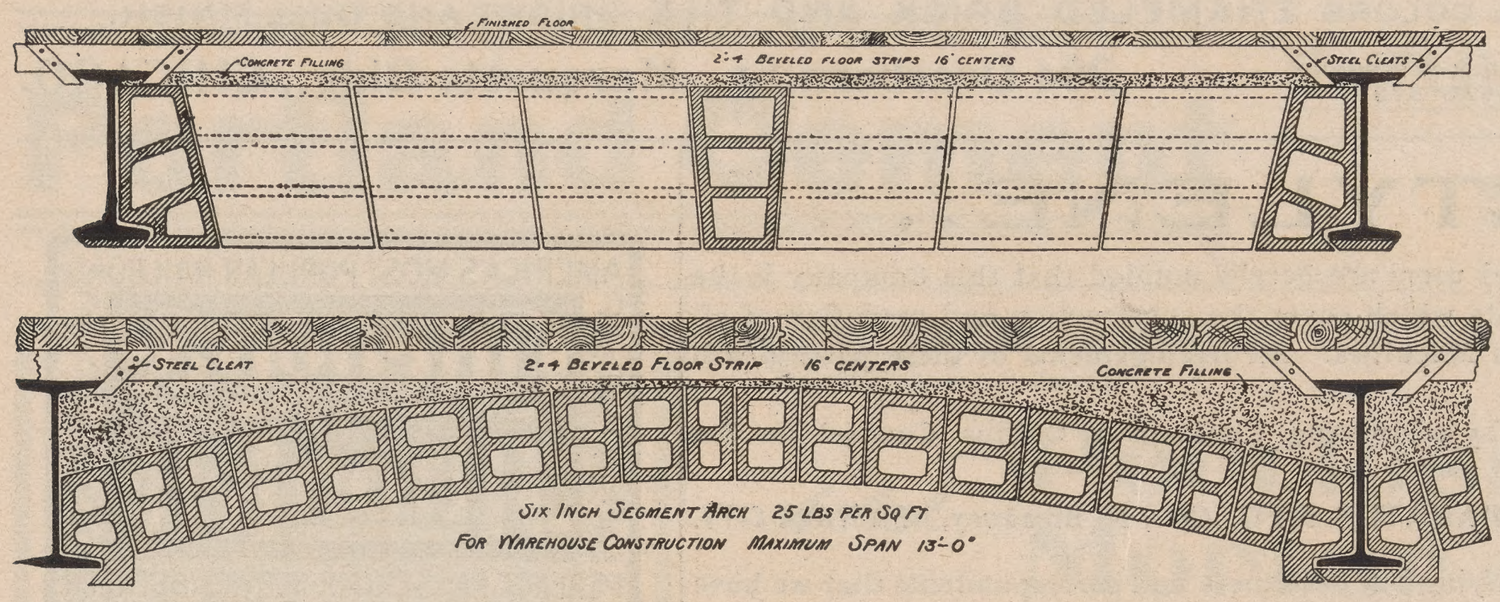
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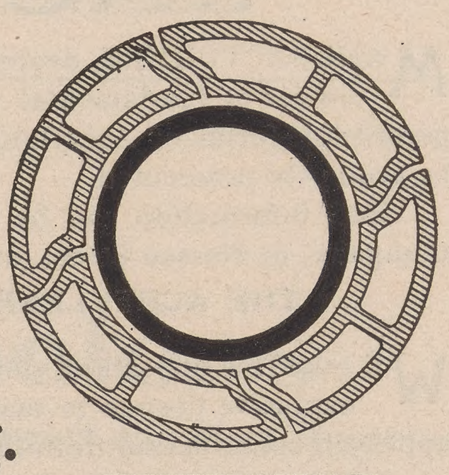

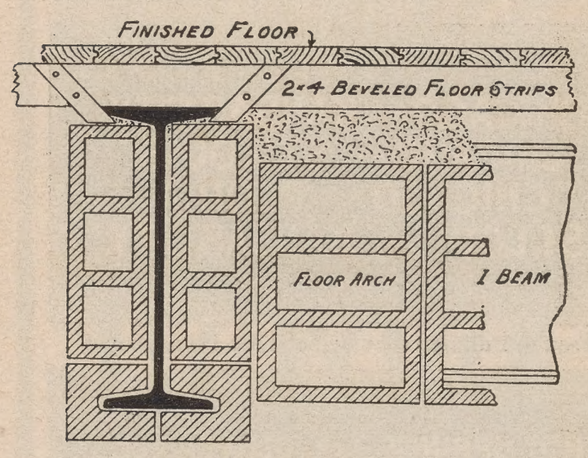

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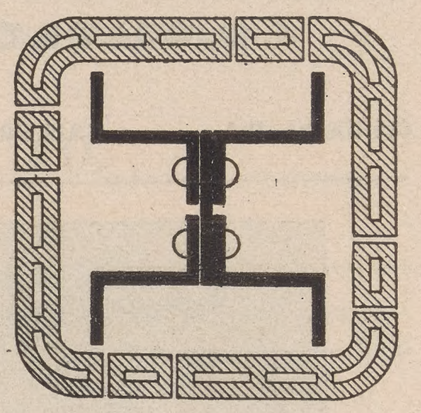

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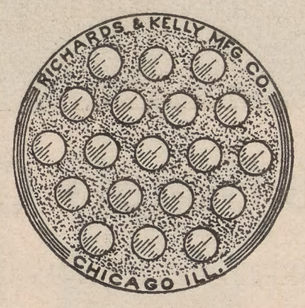

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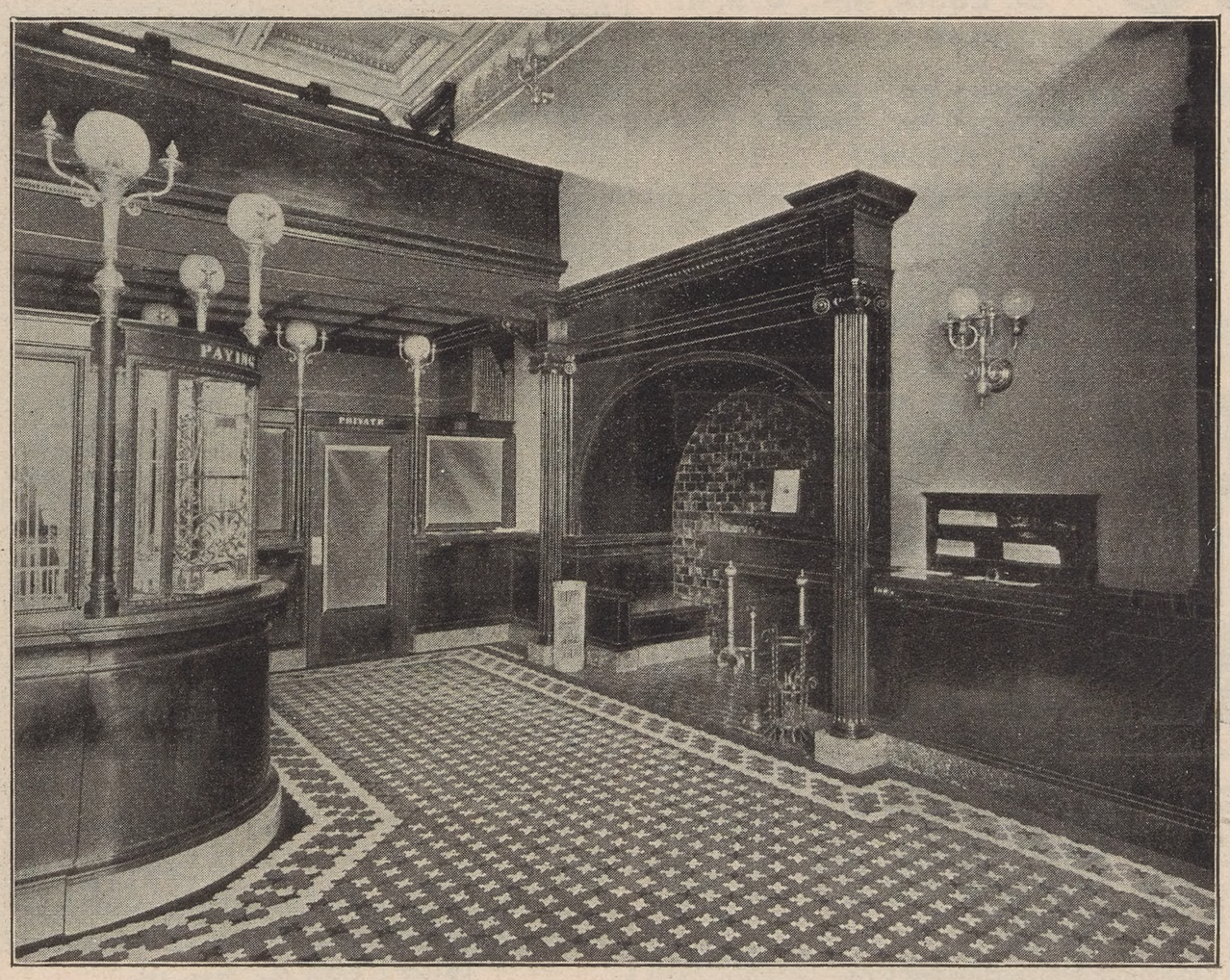

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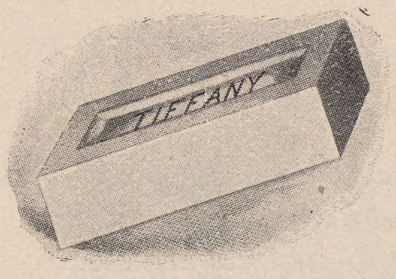

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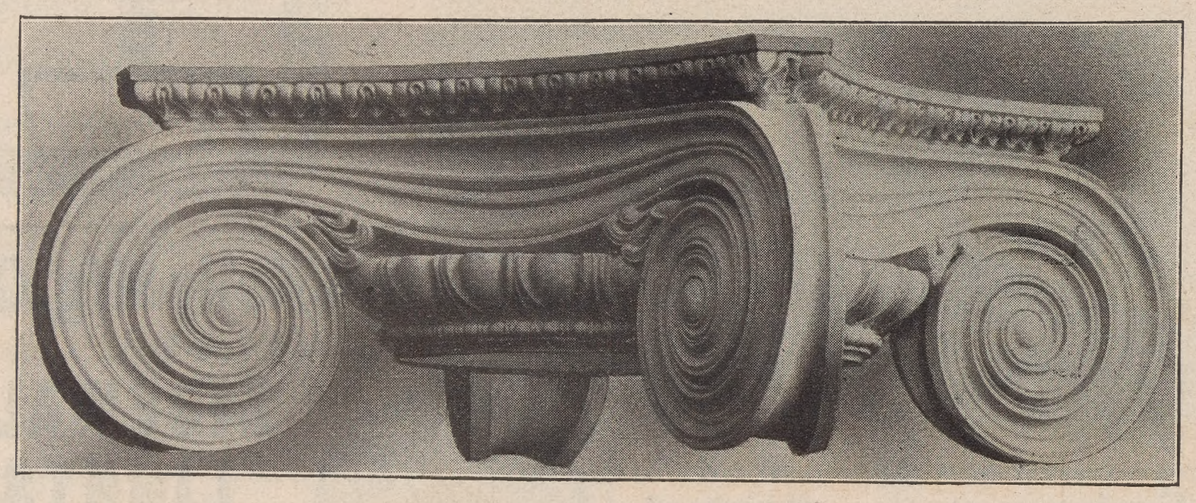

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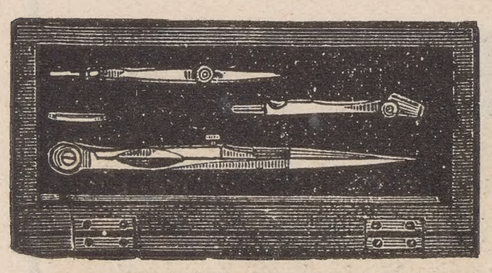

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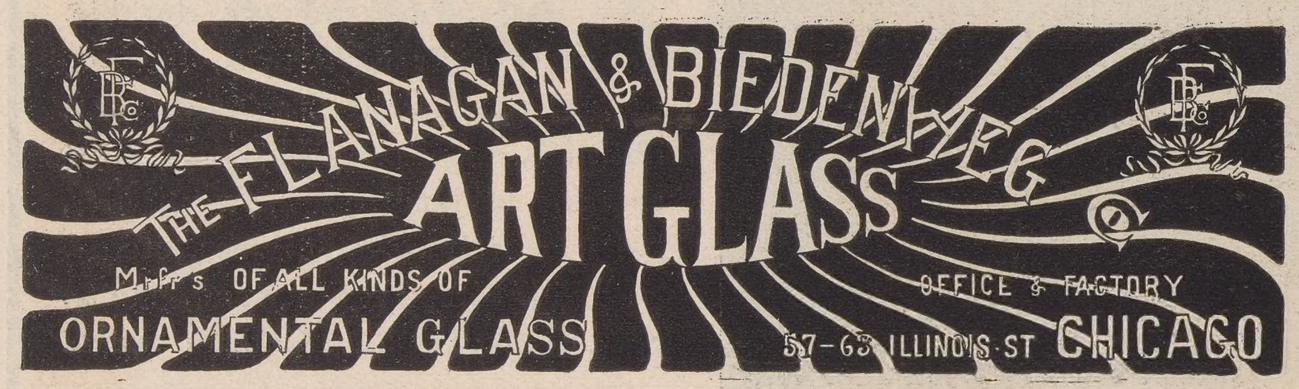

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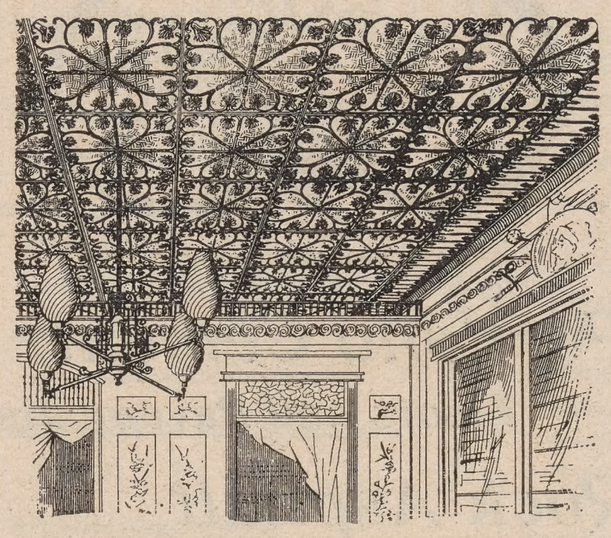

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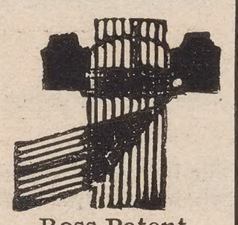

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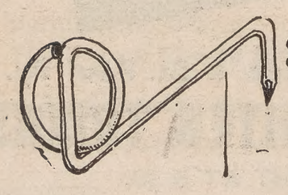

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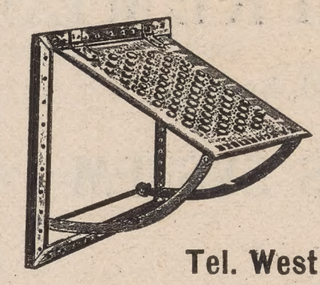

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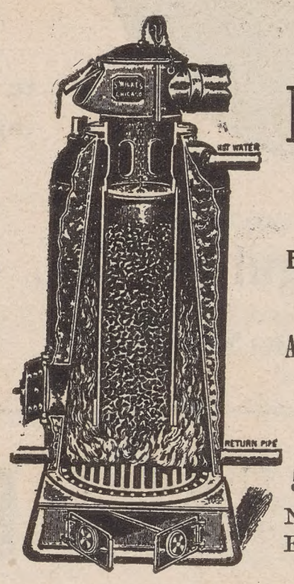

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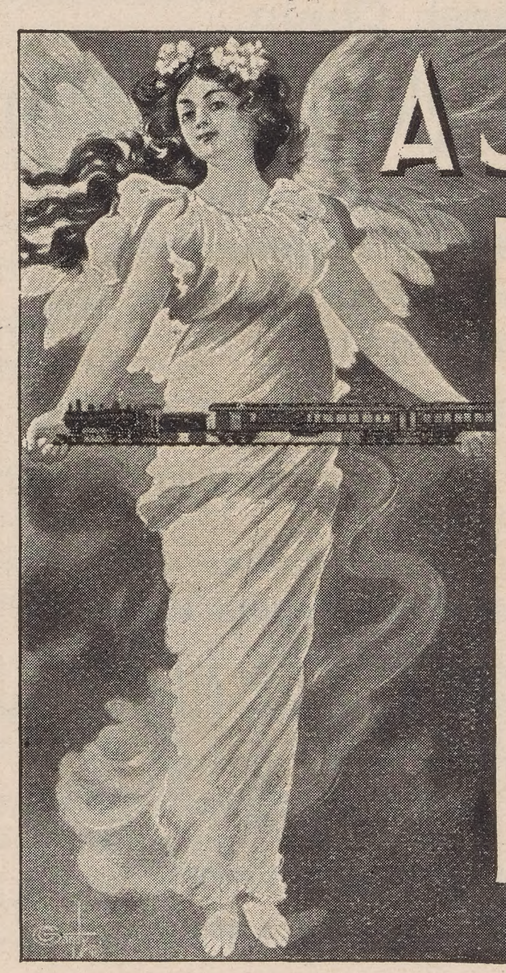

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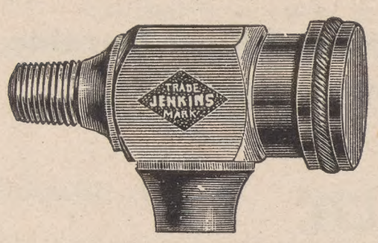

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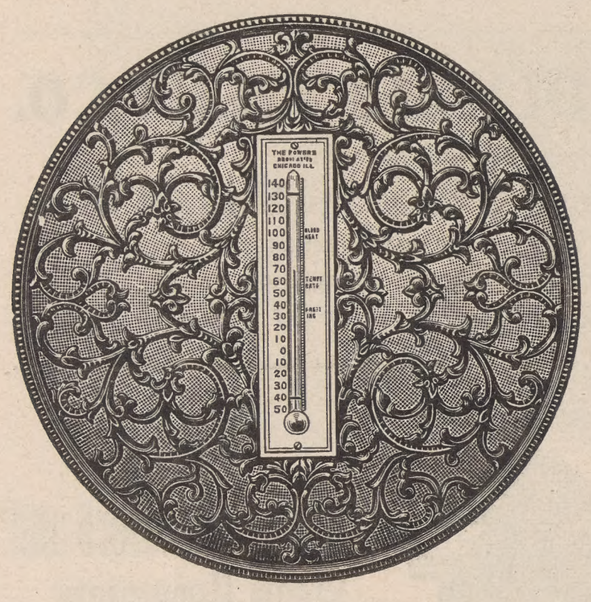

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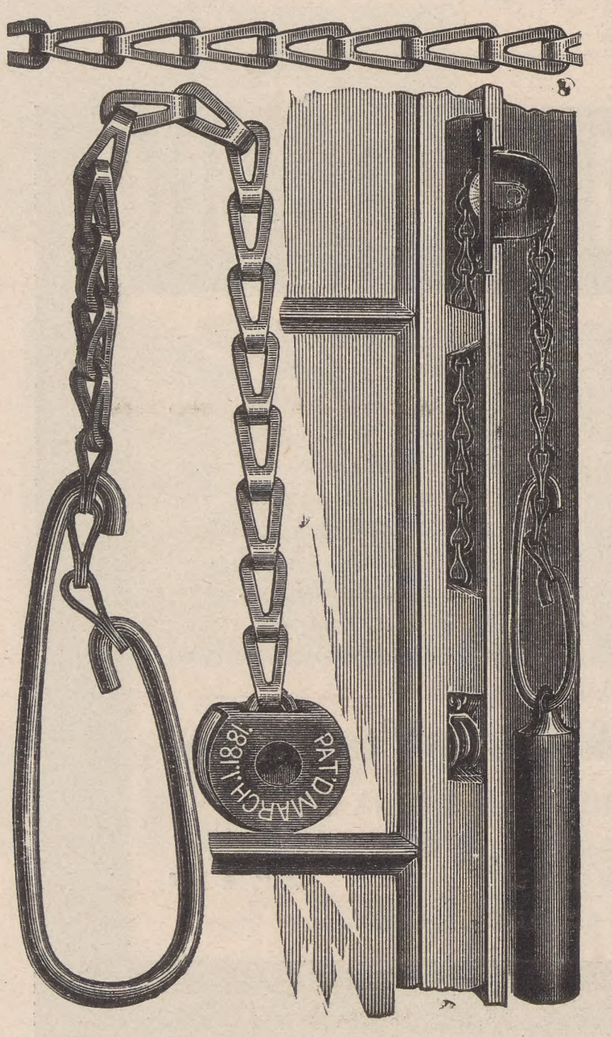

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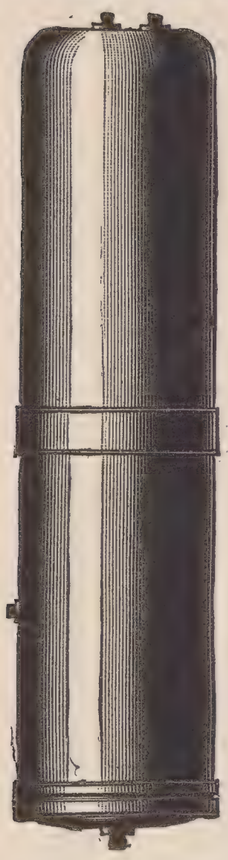

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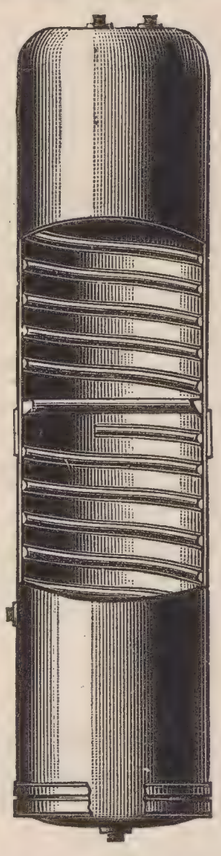

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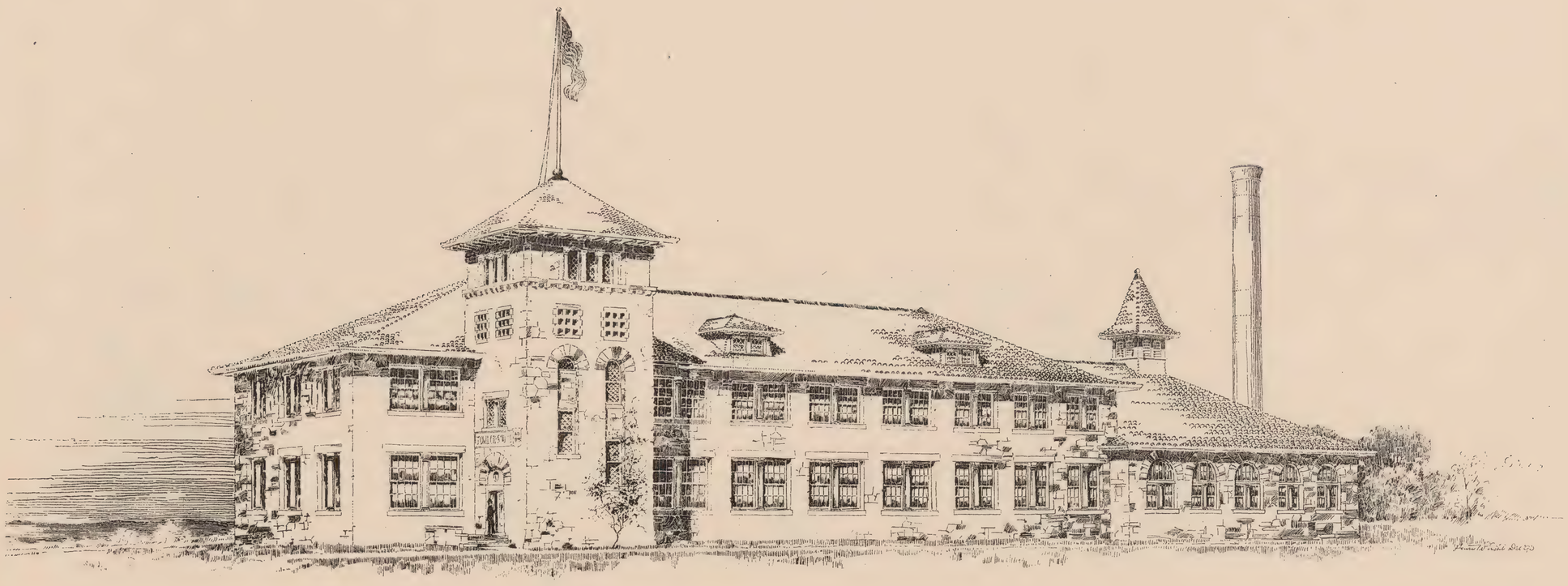

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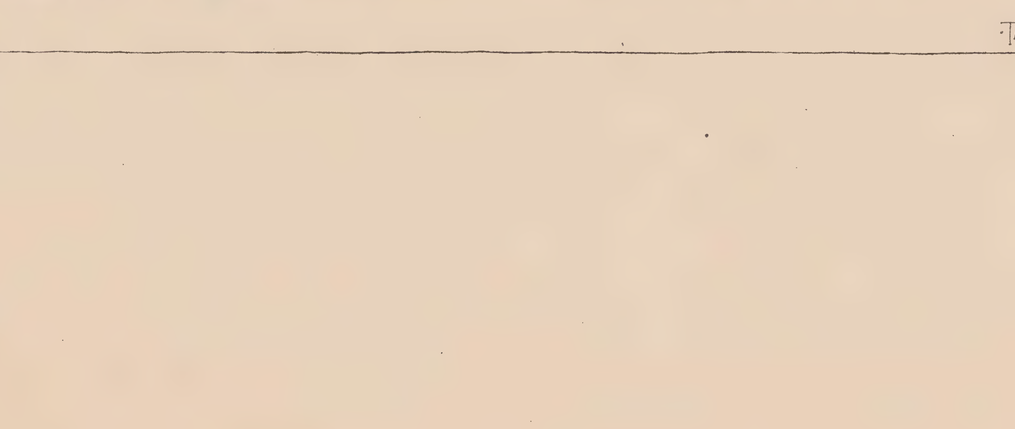

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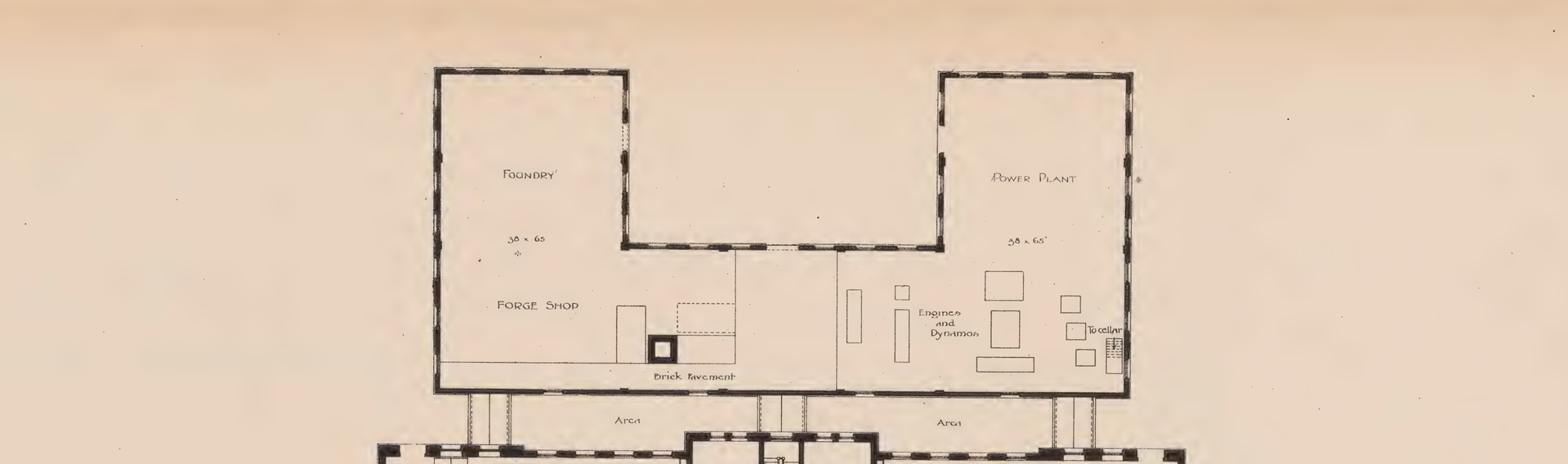

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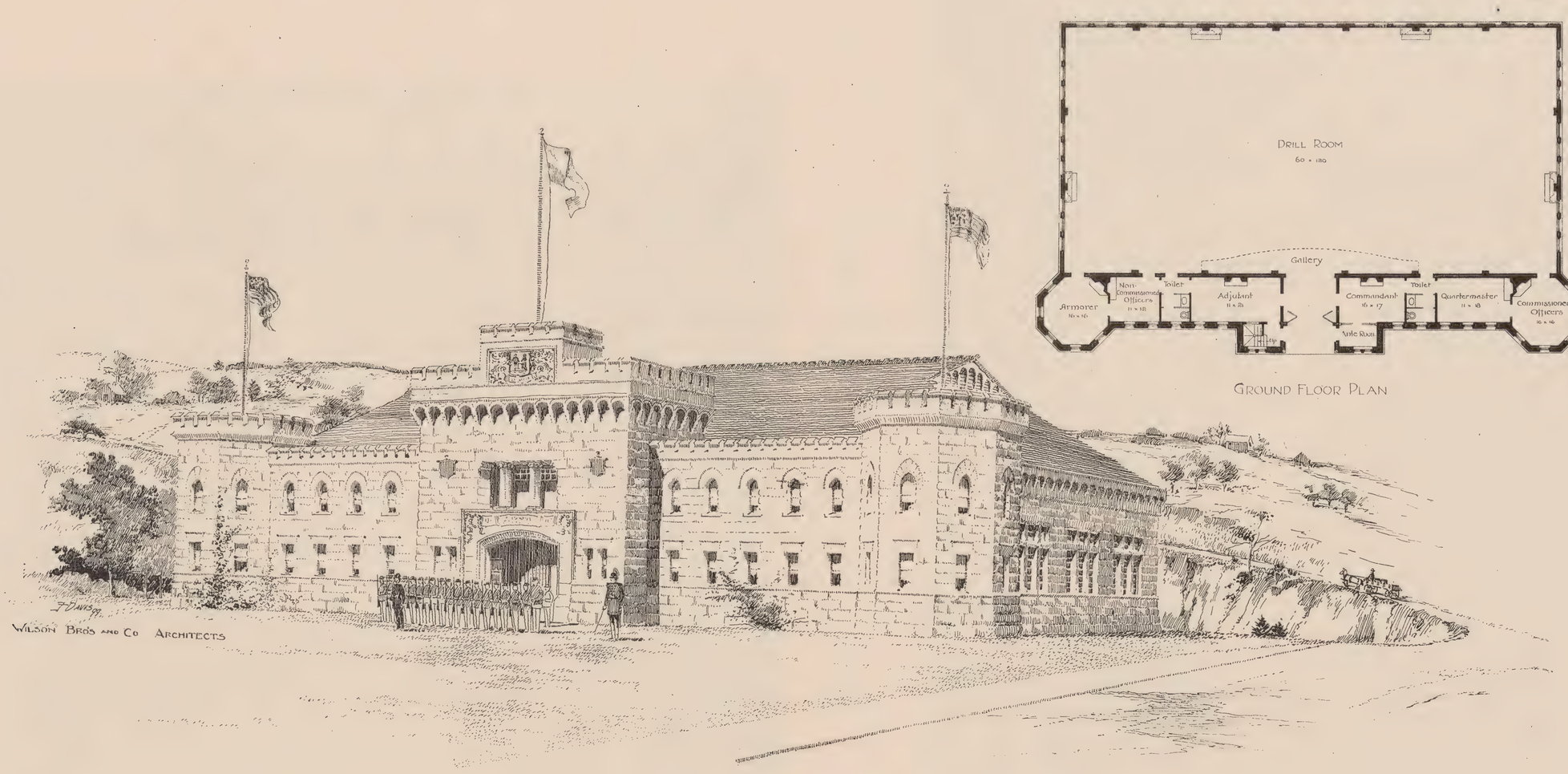

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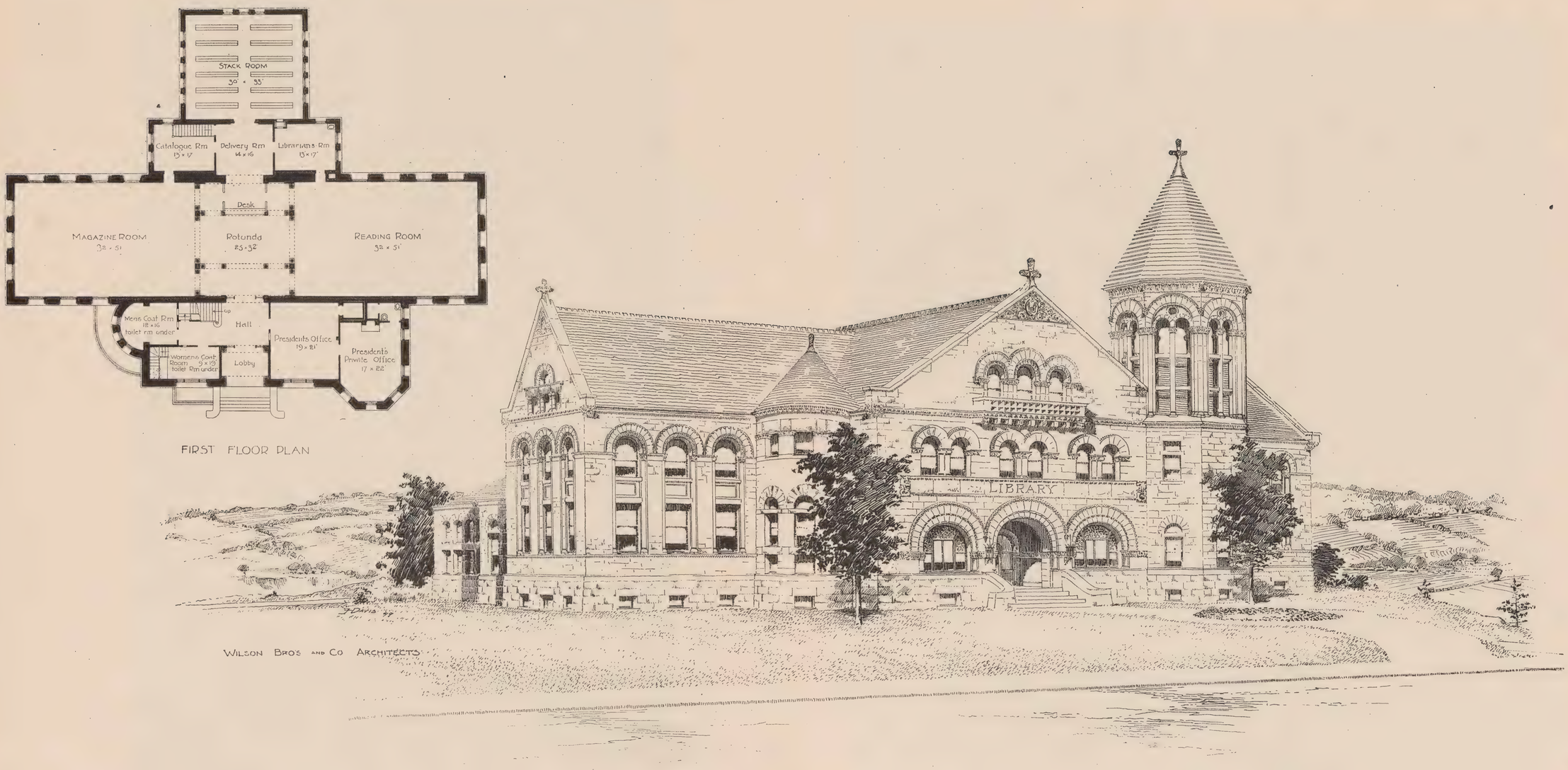

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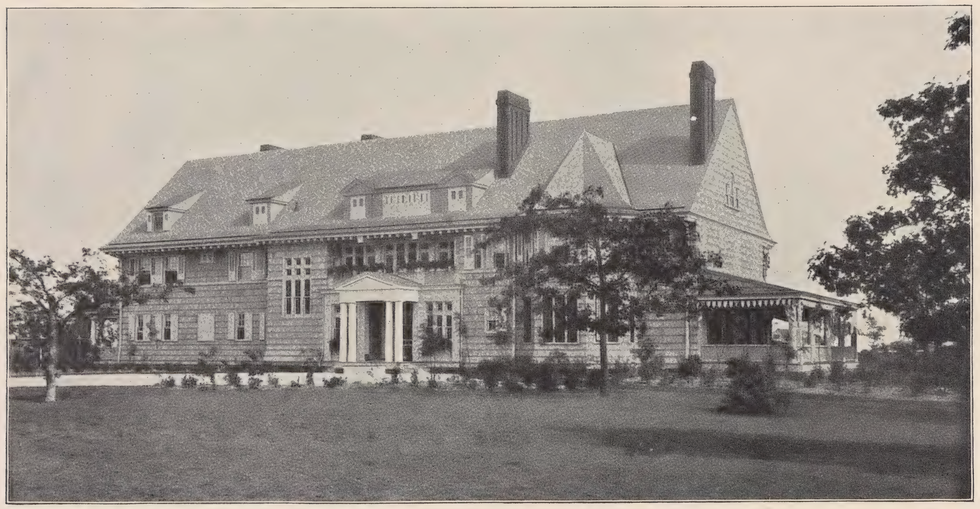

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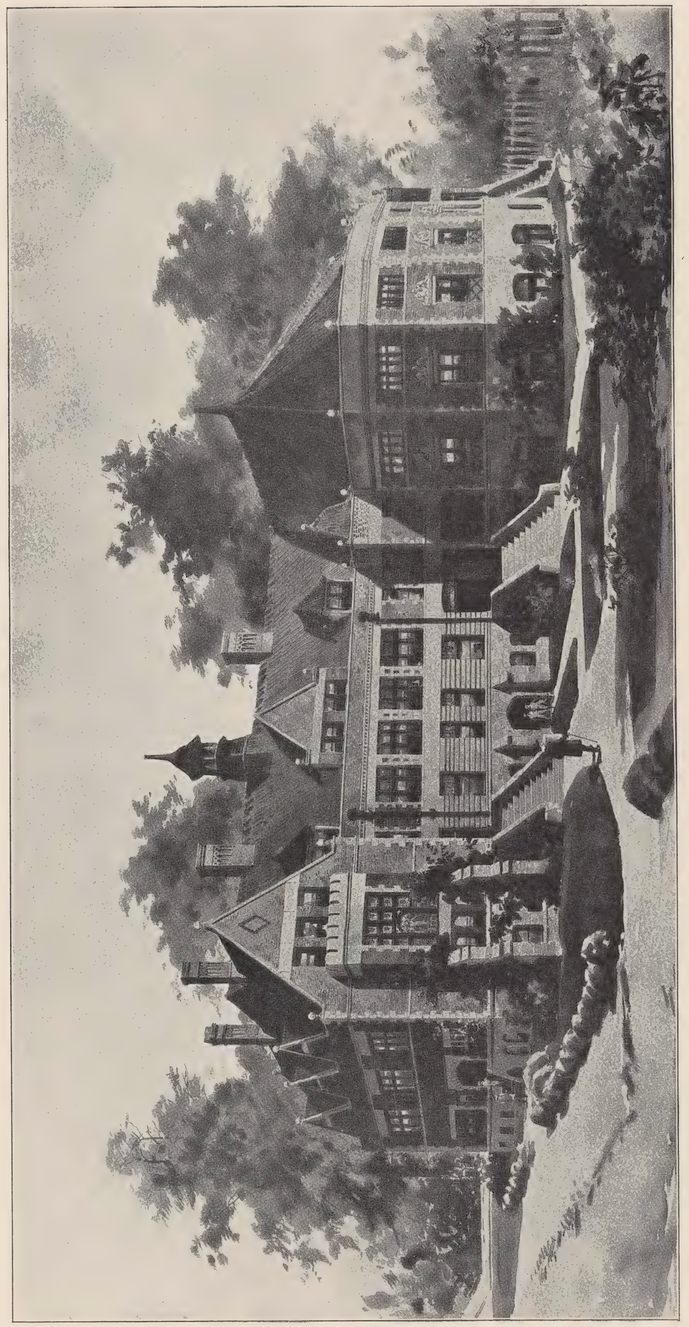

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A Deplorable Building Accident.

The collapse of the Coliseum at Chicago, or rather the twelve iron arches put up as the skeleton of the mammoth structure, which occurred Monday, August 28, was a most appalling disaster. The last of the twelve arches spanning the area, 300 by 160 feet, had been put in place the preceding Saturday. The arches were twenty-five feet apart, and each eighty feet from the base to the highest point. They all went down together, killing nine, and more or less seriously injuring fourteen men. When it is considered that the work was in charge of men whose mechanical training and experience is not to be questioned, the cause for the disaster seems very inexplicable. The coroner's jury ended its investigations Tuesday, September 5, and returned a verdict censuring the Pittsburg Bridge Company and its superintendent of construction for gross carelessness and neglect, and recommended that the matter be referred to the proper authorities for investigation. Another attempt will be made to complete the structure.

The National Export Exposition.

The National Export Exposition, to be held in Philadelphia from September 14 to November 30, promises to be one of the important events of the year to architects and builders. It is distinctive in its character, as it is probably the first instance where so complete an exhibit of products suitable for export has been made. It is held under the authority of Congress and is indorsed by the leading commercial clubs and boards of trade of the Union. With the exhibits grouped in characteristic arrangement, it is noted that twenty per cent relate to the architectural and building interests. These are not restricted to products of the United States alone, but a fairly good representation of European products is presented, thus affording an excellent opportunity for comparison. Beginning October 10, and in connection with the exhibit, an International Commercial Congress is to be held. Officially appointed delegates from thirty-five national governments will be present, besides thousands of others directly interested in international trade conditions. Subjects of supreme importance to American interests will be presented by men of national reputation in a series of addresses on Foreign Trade, An International Currency, The Inter-Oceanic Canal, and similar topics. The Philadelphia Commercial Museum, under whose auspices this exhibit and congress are given, is a public institution, supported by the city of Philadelphia, the State of Pennsylvania and the National Government. It aims to be a bureau of information for business houses all over the world. The object is a laudable one, and will undoubtedly receive the encouragement it deserves from the commercial interests at home and abroad. The successful operation of these commercial congresses, the first of which was held in June, 1897, means the bringing together of the producers and consumers of all nations, a necessary condition to successful trade relations. The commercial spirit of the age is toward expansion, and to successfully follow this line requires that every legitimate aid be utilized. The cause is worthy of energy. The forthcoming Commercial Congress will certainly prove profitable.

THE CITY BEAUTIFUL.

A STUDY OF THE ARTISTIC POSSIBILITIES OF CHICAGO.

BY LUCY FITCH PERKINS.

IN his preface to "Municipal Government in Great Britain" Mr. Albert Shaw expresses his belief that "municipal reform proceeds haltingly in the United States, because, for one reason, many citizens who desire sincerely to aid in the regeneration of their town life and neighborhood affairs have formed no definite municipal ideals." If this be true, then to form such ideals in his own imagination is the first duty of every citizen whose loyalty would go deeper than mere indorsement of whatever happens to be. The truest patriotism lies in loyalty to the possibilities rather than to the actualities of our civic life, and in a recognition that its structure is on a sure foundation if the ideal city exist first in the hearts of its citizens. Let it be built first of the stuff of dreams, and it will later appear wrought in bricks and stone. As the real picture exists imperishably in the artist's mind, and afterward finds its expression upon canvas; as the building must first take shape in the brain of the architect, then upon paper; and last of all, in steel and marble, so in forming a definite municipal ideal we are building an imperishable city which no change except progress can assail, and are taking the first step toward its actuality by clearly picturing it to the imagination. Our great cities spring into being as children of necessity, but to quote Albert Shaw once more, "nobody had wisely anticipated their development, and while they are hives of industry, sufficiently organized for temporary purposes of industrial production, they are but ill-organized, even chaotic, as regards comfort, health and the amenities of civilized life."

Built upon industrial foundations they must and should be, and it is perhaps not wholly our fault that in our devotion to material progress we have grown large rather than beautiful, and that our more mature years must be spent in pruning the luxuriances of our early growth and bringing a more ordered beauty out of untamed abundance. Having sown our esthetic wild oats in the adolescent period of our municipal life, our task now is not wholly constructive, but iconoclasm must and does work hand in hand with the constructive spirit to bring Chicago to its possibilities.

One of the first necessities is to know and face the problem, considering the city as a unit. We wish Chicago to be beautiful, but in what does civic beauty and charm consist, and how may they be attained? What are the elements of that beauty which so enthralls the visitor to foreign cities? It is not merely that the appetite of the eye is satisfied by strange sights or by material beauty. The roots of appreciation go deeper, and this satisfaction springs from several different sources, some of which are possible to Chicago, while others are not — as yet.

Preëminent among the qualities of foreign cities we note the charm and interest conferred by historic and literary association. London is not merely a city of buildings and industries — it is the city of the English sovereigns. It is the city of Dickens, of Thackeray, and of characters as real as themselves, which they have created. In imagination the name of London calls up an endless pageant of past personages and events, and it is this which makes the significance of the city quite as much as its present material aspect and life. Obviously, the charm of historic association is at present denied our occidental newness. We are too near our civic birth to view it through that veil of romance in which Time envelopes events in proportion to their remoteness. We can not, as yet, even guess what in the line of romantic interest can be evolved upon the banks of a river which the Indians named "the Onion," and which has more than lived up to its pristine significance in the few decades that have elapsed since its christening.

We have made an excellent beginning upon our romantic history in the three events which move us most as we look back. The early tragedy of Fort Dearborn, the disaster of the great fire and the heroism which wrested victory from that defeat and won the admiration of the world, and the third an event too near and too auspicious to be safely estimated — the Columbian Exposition. Let us remember, for our comfort, that though our traditions are few, we have already in our brief civic life made the courage and energy of Chicago a household word not only in our own land but beyond the seas as well, and that we have confessedly achieved the greatest artistic triumph of the age in our World's Fair. Let us take this thought with us while we consider our failures and defects, and give to our critics who say we have no traditions the answer of the self-made man when he was reminded of his lack of noted progenitors: "Sir," said he, "I am an ancestor myself."

The lack of historic association has certain advantages in the present task of clothing our city in material beauty, for if the present age plans wisely no hearts in the future need mourn over such destruction of historic remains as was necessary when modern Paris came into being. There, new streets were plowed through beautiful structures which had stood for ages, and no monument of previous times, however sacred, was allowed to stay the march of municipal improvement. Beautiful as is modern Paris, there is always a sense of loss in recalling what once existed, from which it is not probable that future Chicagoans will ever keenly suffer. At present our historic remains lie mostly in our alleys and would not be regretted if removed. The few buildings in Chicago which have been hallowed by years or by literary association would probably be willing to forego the hallowing they got. As for instance, Mrs. Van Rensselaer truthfully described one of our buildings in these sporting terms: "The first story is Greek, the second Roman, the third Græco-Roman, and the rest catch-as-catch can"; and of our Board of Trade she said that it "combined the dignity of a drummer, with the repose of a man having St. Vitus' dance." In addition to these, the late Chicago postoffice received literary mention in that it was condemned in print as unsafe, and with its passing we have lost one of the few relics of what Jo Gargery would call our early "architecturalooral" splendor.

The second quality, which is characteristic of many foreign cities and which we must forego, is that picturesqueness which delights the artist and which may exist in the midst of poverty and squalor. That accidental effectiveness which is often the result of antiquity and decay may well be sacrificed to wholesomeness, even though it be painfully new and modern, and we need never fear that the true artist will lack material even though model tenements be substituted for every picturesque tumble-down building which may be good in color. The American girl covered this ground in her reply to a supercilious foreigner who said "America has no ruins and no curiosities." She said, "Our ruins will come fast enough and we import our curiosities."

The ordered beauty of a modern city must rest upon surer foundations than either associations or picturesqueness, desirable though these qualities be, and this foundation has no time limitations, but may be common to both old and new.

This foundation is ethical. It would seem simple enough to dream of a city beautiful from the standpoint of design alone, but it is impossible to separate material beauty from ethical considerations and commercial demands.

Reflect upon the municipal ugliness which results from the one fact that the smoke ordinance is not enforced, because people prefer to save a few dollars on their coal bills and are willing to break the law and sacrifice beauty and cleanliness to this end, and then realize that this is only one of many hindrances in the path of progress, and we see at once that civic beauty without good administration is an impossibility. Here we arrive at a fundamental principle. *The material beauty of a city must rest upon a foundation of common virtues involved in an honest government, supported by honest citizens who are inspired with civic loyalty and pride.*

Each city has a certain individuality as truly as has each person. New York is rich, fashionable, aristocratic, splendid; Philadelphia, staid and dignified; Washington, pompous with diplomatic dignity, and Boston must be admitted to be superior, having more traditions to increase her charm than have most American cities. Estimated in this way Chicago must be conceded to be commercial and material, and to be young. She must, therefore, make the most of her youthful charms of courage, daring and high spirit, so well expressed in the face of our "I will" maiden. Here we discover another principle: *No city can clothe itself in beauty foreign to its nature. It must progress along the line of its own individuality. Its garments must suit the wearer.*

What, then, may a commercial community, whose very life is founded upon trade and manufacture, expect in the way of the development of art within its borders and its expression in civic beauty? The relation of art to industry is too large a question to discuss here, but in relation to our subject it may be said that one of the most dangerous of social fallacies is that art has no place by natural right in a commercial community. We know from history that the purely commercial nations of antiquity have left

no such mark upon their own and succeeding times as have those nations whose legacies were works of art. We know that Athens has been worshiped for centuries because of its beauty. Commercialism against beauty is forever on the losing side. Industry and art form an invincible combination which will make any city the admiration of the world. We are not yet fully awakened to the truth that no nation or city can permanently maintain its commercial prestige without art. It is conceded that the labor of furnishing the world with the material necessities of existence is not enough to provide work for all. To confine our industries solely to the production of physical necessities is, then, a self destructive policy from a commercial point of view. It does not furnish work enough for all, and, in addition, such work, though honorable, is not inspiring. It is a treadmill — there are no permanent results. The universal hunger to put ourselves into our work, "to produce something of lasting value and meaning to others," has a bearing upon industrial problems, and we see that man can provide work for the growing race only by the industries and arts which minister to the spirit as well as to the body — that there is enough for the whole race to do if we but employ ourselves upon spiritual as well as material necessities. So industrial necessity drives us to the higher pursuits. To illustrate — the value of cotton is small; let a beautiful design be wrought upon it, and it increases in money value many fold. To what is this increase in value due? To art. Linen thread costs little; let the designer weave of it a beautiful lace and the same thread increases in value a thousandfold. What has increased its value? Art. It has been said that there are but two actual values — land and labor. To this it seems necessary to add a third — creative imagination. Acting through labor it not only produces all works of fine and industrial art, but we owe to it also the very machinery of industrial progress. The loom and the steam engine are as truly the products of art as are the paintings of Millet and Inness.

The value of food products can not be increased by the application of art or design to any great degree, but the possibilities of such increase in commercial values through the coöperation of art and labor are practically unlimited in other industrial directions.

Obviously, then, those communities which hold the position simply of feeders are at a disadvantage in the struggle for industrial supremacy. There is not the same possibility of increase in commercial values that there is with a community whose industries permit the coöperation of the art spirit.

The industries of Europe in many ways far surpass us for this reason, and until we get past the period when our designs are made "by main strength and stupidness," as one handicapped decorator pathetically put it, we can not hope to stand on an equal industrial footing with other nations. How far behind American cities are in this particular we do not like to think. While other nations, realizing that commercial preëminence rests largely upon the artistic quality of products, establish art schools and give the best possible training to their youths free of cost, we in this country protect ourselves from equality with other nations by levying a tariff on works of art, which has been effectual in keeping most of them out of the country. This policy for protecting home art has resulted in making it the dearest ambition of every art student to go abroad to study — in a place where art is respected and where beauty is enthroned in her sovereign place.

If there is one principle more obvious than another in Paris it is this: They realize that a position of industrial preëminence in the eyes of the world can not be maintained without exalting beauty to its true commercial value. For this reason Paris is not only made the center of the world for art study, but the government annually expends great sums in the purchase of works of art with which to decorate her public buildings and her art galleries. And not only that, but the recognition of the value of civic beauty to commercial prosperity causes the government to expend immense sums in cleaning the streets, in making a park practically of the whole city, with trees and flowers beautifully kept; in building respectable buildings for housing the poor, and making every building a matter of civic interest and pride. What is the result? The eyes of the world are turned on Paris, and she has led the whole continent of Europe in municipal reforms since the revolution. Verily, ugliness is expensive!

We have arrived now at three principles:

First, the material beauty of a city must rest upon a foundation of the common virtues involved in honest government;

Second, a city can only clothe itself in beauty which is in accordance with her individual civic character; and,

Third, art is essential to the industrial preëminence of any community.

Let us seek for the application of these principles to Chicago, first considering the plan of our city. In order to make it more clear, let us imagine the whole city spread out under our vision like a map. One of the first principles in city building would evidently be to make the most of the natural advantages of its site. The Athenians understood this and crowned the Acropolis with the Parthenon. Chicago's site had two natural advantages, the river and the lake front. What have we done with our only beauties? We made an open sewer of the river, and gave the lake front to a railroad corporation! Let us not dwell upon these painful facts, but look eagerly forward to the artistic redemption of these abused blessings.

Many suggestions have been made as to the river. The city has expended millions of dollars in building a drainage canal into which we shall dismiss our refuse. Instead of turning our sewage into a source of revenue, as we are assured has been successfully done, we make it a source of constant expense without securing, in the opinion of many experts, the best results to ourselves or to our neighbors. Expensive and questionable though this method may be, it is yet an unmeasured improvement upon what we have had, and removes at once the worst odium from our unfortunate river. The trend of heavy commerce is more and more toward South Chicago and the Calumet, and the prophecy made a few years ago that eventually the river will be relieved not only of sewage duty, but of the heavy traffic as well, is already being fulfilled. When this is done, there is no reason why the Chicago river should not be to us what the Thames is to London and the Seine to Paris. The industries now on its banks are, for the most part, grain elevators and lumber yards, and should the traffic be turned toward South Chicago these would naturally follow. Stone embankments could then be constructed, and as masted vessels could then be excluded from the river, the necessity for draw or jackknife bridges would no longer exist. Then every bridge could be made a thing of beauty in itself and a feature in the view without detracting from its usefulness.

The banks could be turned into boulevards, with grass, trees and drives connecting with the Lake Front and Lincoln Parks. The river front would then make delightful sites for hotels and apartment houses of a high class, and the citizens could enjoy voyages in pleasure boats up and down the river and into the lagoons of the different parks by inland waterways extending for miles!

The redemption of the lake front will be accomplished by Grant Park. Our ambition for the lake front should not be satisfied, however, even with the fulfillment of this vision, but should operate until the whole lake front, from Jackson Park or beyond, to Lake Forest, becomes a fit setting for our opalescent lake. Why should we not make our water front the admiration of the world as well as the Neapolitans? We must make for ourselves what nature did not supply — a picturesque, broken shore line. The Hyde Park reef, for example, would make a beautiful island park, with comparatively little expense. Grant Park naturally invites us to the consideration of the rest of our park system, for it will form the eastern link of a series of parks and boulevards extending in a large circle about the city. There is nothing in our civic history which shows more foresight and better management than our excellent park system. Following this precedent, we should now establish a second chain of parks four or six miles beyond our present system, and should reserve the Des Plaines valley entire. Not only were our municipal lungs well planned and placed, but they have been well cared for, and we present to the world the unique spectacle of green parks without prohibitory signs. No Chicago mother need say to her child what the New York mother said to her little boy, weary with playing on the stone walks, "Never mind, dear. Tomorrow we will go to the park and have a beautiful time all day keeping off the grass." Our parks are worth ten times as much for this privilege, and I never visit them without being grateful to our commissioners for it.

If one were to be hypercritical, one might suggest that the appearance of Washington Park would be improved by the omission of those disfiguring "set pieces," which look as if they had been arranged for a Titan funeral. It is difficult to imagine how the roll of carpet, the fountain done in foliage plants, and the globe and the gates ajar constructed of that plant familiarly known as "hen and chickens" have been allowed to flourish side by side with the beautiful and artistic pools filled with water

plants, which have so delighted every visitor. It is but a step in Washington Park from the sublime to the ridiculous. To make her park system ideal, Chicago should next follow the example of other cities and appropriate squares here and there for small parks and playgrounds. The well-to-do are now supplied with park privileges, but the poor districts are shut away from the enjoyment of grass and trees to a greater extent than we realize. It is literally true that many children in Chicago do not see grass and trees the year round. Dr. Graham Taylor says that to conduct one picnic of poor children to the park and see them choose a little bunch of flowers to take home rather than a bag of candy, as had been his experience, would convince the most skeptical of this need. There would be less need of fresh-air funds if the city did its duty in providing breathing spots in the poor districts. There are plenty of squares not closely built upon which the city can afford to appropriate for such purposes when our new tax schedules are in working order.

From the parks we are led inevitably to the consideration of our common streets. The boulevards, which are our pride, come under the providence of the park commissioners. The contrast between them and the streets cared for by the city is painful and humiliating. Why should we not make a park of our whole city? Why should not every street have its border of well-kept grass and be lined with trees? To approach Chicago from any side is a depressing experience. Mile after mile of level treeless streets stretching out over the prairie, the scattered buildings, with their window-eyes gazing unwinkingly before them, and their blank sides awaiting the touch of the next building, which will be inevitably of the same character. Most of such ugliness is unnecessary and could be relieved to an incalculable degree by the simple plan of planting trees and vines. The lesson is driven home by a glance at Boston, who covers all her defects, and enhances all her charms, by this means. Grass, vines and trees would make hideousness itself attractive. If I were allowed but one suggestion for the beautification of Chicago, I should say with all possible emphasis: Plant trees everywhere and raise grass, shrubs and vines! The ugliness of streets is much increased by the hideousness of the elevated structure and stations.

When we come to realize that eyes and ears have rights as well as noses, we will find means to conceal our tracks instead of elevating them. Grade crossings must be done away with at any cost, but the elevated road is a disfiguring solution, and here is even more ugly than there is any need of its being. It must give way in time to underground roads. A good suggestion is, that where tracks cross the boulevards an ornamental portal or arch, similar to the Arc de Triomphe of Paris, be erected to conceal the tracks at that point.

Such a plan would be especially suitable for the crossing of the Illinois Central tracks above the Midway. The arch would make a grand entrance to Jackson Park, and would ornament that boulevard, which should be to Chicago what the Champs-Elysées is to Paris. Great care should be taken to guard the Midway from being spoiled by having cheap or ugly buildings fronting upon it. The standard of the stately buildings of the University should be maintained the entire length of what may be one of the famous streets of the world; but at present we have no means of preventing any one from putting up a monstrosity there should he choose to do so. There is much to admire in the small residence parks like Groveland and Woodlawn. Here people have put their houses at the back of their lots and clubbed their front door yards, with delightful results. They enjoy practically all the advantages of city and suburban life at the same time.

The necessity of alleys in residence districts is an open question. Alleys as conducted in Chicago are an unmitigated evil. They are places where filth accumulates and where unscrupulous contractors may carry on a system of inconspicuous and remunerative neglect. They are not only breeding places of disease germs, but foster the more deadly microbes of slovenliness and dishonesty. If our alleys were kept as well as those of Indianapolis we should be proud of them. We need not go so far as Paris for examples; we can learn more from Indianapolis than we shall be likely to put in practice. Every alley there is concreted, and is swept every morning before six o'clock, and citizens who keep untidy places are liable to prosecution by the city. The Parisian system of carrying garbage away each night from receptacles placed in front of each house is a great gain to public health and beauty and saves all the space, usually given to alleys, for more agreeable purposes.

If it were possible to begin again at the very beginning we should probably not arrange our streets after the gridiron plan. The laying out of the streets in Chicago and other western cities has been accomplished with a rigidity bespeaking the undertaker's skill in that occupation.

The most beautiful and economically planned cities are those whose streets radiate from a common center. Washington, conceded to be our best planned city, was laid out by a French architect after this plan. Albert Shaw points out that Chicago lost a great opportunity which seemed designed by Providence for her artistic redemption when she rebuilt after the fire. It would have been possible then for the city to have purchased the whole tract and laid out a magnificent central district with parkways and gardens, with a broad inner circle or ring street and a series of avenues radiating from it. He says also it would have been possible to sell the available building sites opening on this ideal system of open centers and main distributing arteries, for money enough to repay the entire outlay and perhaps to erect a monumental building or two. No doubt this is true, but we comfort ourselves with the thought of the high spirit with which Chicago met this crushing blow, and do not blame her for failing to consider her looks where life itself was in danger.

Let me add one more suggestion before we pass to the consideration of our city architecture. The disfiguring signboards should not be permitted to remain in our streets. Chicago is a most undignified and unblushing advertiser and will spoil any building or street with disgusting pictures, proclaiming the merits of soap — of whiskies — of anything which can be sold for gain. Why make greed conspicuous? That a city can be clean, can be solvent, can have money for needed improvements, has been demonstrated by less rich cities than ours.

Let us discuss the architecture of our city, for convenience, under different heads.

First, Government Architecture, represented by our public buildings. What example does our National Government set for her citizens to follow? It is not too much to say that there is not a leading nation in the world where the noble art of architecture suffers from the hands of Government as it does in the United States. Let any one who doubts this look at the public buildings here and elsewhere. The office of government architect has heretofore been so poorly paid that no architect of standing would take it. This, of course, rendered good design impossible, and a series of expensive but tawdry structures were put upon the American public at a cost which might just as well have given us permanent architectural monuments of which we might be proud. The office has been a part of the spoils system and has heretofore been openly given to men of no training, mere office-seekers, but because of recent legislation the outlook is now much brighter. We may well rejoice that Chicago has been the first to enter a protest and to secure a local architect to coöperate with the Government architect in the erection of our new postoffice. How humiliating it is to think that a government like the United States should erect a building for a city like Chicago which in fifteen years was condemned as structurally unsafe, and which was from the first an architectural fatality. The Government has yet to learn that mere building is not necessarily architecture, any more than a schoolboy's composition is literature.

Second. The Commercial Architecture of Chicago stands in proud preëminence, for our office buildings lead the world. Structurally, the world looks to us. The tall buildings are justified on business rather than artistic or sanitary grounds, but that they need not be in themselves ugly, is proven by the Masonic Temple, Marshall Field Wholesale, Monadnock, Woman's Temple, and other buildings. There seems a regretable tendency at present to produce mere business blocks, piled, without proportion or design, story above story. This sort of building and the occasional vulgar structures which would actually commit the absurdity of placing a Greek temple as the crowning two stories of an office building, detract from our great reputation as builders of magnificent sky scrapers, but can not wholly destroy it. The architects have succeeded in getting a bill through the legislature making a civil examination a necessary preface to an architectural career. Until very recently any one could start an architect's office and practice upon an ignorant and unsuspecting public. Such practitioners not only injured the standing of the profession, but by making the construction of unsafe building a possibility, the lives of people were constantly jeopardized. The Wabash avenue fire and other like fatalities in Chicago and other cities

have aroused the people to a realization of the heavy responsibility involved in constructing buildings, and the time will come when people will demand that every building in the business center be absolutely fireproof, as well as of strong construction. There are even now a few architects who refuse to build any but fireproof buildings where public safety demands it, in spite of the false economy of owners which leads them to take risks in order to save money.

If our streets were arranged with possibilities for open squares and vistas, architecture would have greater opportunities. As we look up Dearborn street and see the tower of the Polk Street Station, we realize the architectural opportunity of such a site, and wish for more of them. If our buildings could be seen to better advantage the city would perhaps take more pride in them.

A third important problem in making any city beautiful is the housing of the poor. Some one has said that it is just as possible to clean the city of slums as it is to drain a swamp, and no city can be truly called beautiful until this is done, and a better average of structure maintained. The views one obtains from the elevated roads and other points of vantage can never be atoned for solely by increasing our down-town and boulevard splendors. It has been said that the greatest misfortune that ever overtook New York was dividing the city into 25 by 100 feet lots. This arrangement necessitated houses that were deficient in light and air, and gave rise to the back tenement. It is demonstrated that a more economical use of space would have given the same area of room with good light and air, and that these evils are due to bad arrangement. The problem of housing the poor has so far been solved that it is proven that houses, good to look at and sanitary to live in, can be made to pay a reasonable per cent to the investor.

Much is said against "four per cent philanthropy." Yet it is far better to relieve suffering humanity on a self-supporting basis than otherwise. The city governments of Glasgow, of Manchester and Birmingham have attacked this problem and have come far nearer a solution than we have. Their sanitary tenements have vastly improved the condition of the poor and have been a source of income to the city. The cottage system presents many advantages over the tenement house, but either plan is better than the no plan we have at present. We are now doing to some extent what New York is undoing — building the back tenement on the narrow lot.

The city owns the land under the Rookery building. Why should it not own land in equally large tracts elsewhere and devote some study and experiment to our tenement problems instead of blindly following the mistakes of our neighbors?

Schoolhouse architecture is another matter of great importance to our city. Is it not vital that that building, which, next to the home, is the center of interest to children, should be beautiful in design? How can we expect to evolve into a nation of discriminating artistic taste when we house our youth in buildings too often both badly planned and unfortunate in design. A nation is measured very largely by the respect paid to education. We are accustomed to create beautiful buildings for religious purposes, buildings which are used but little of the time, and one would not see them less beautiful, but similar respect should be paid to education. Schools for higher education are apt to be much better treated than the public schools in this respect.

So far we have touched upon architecture in man's province, for the architecture of public buildings is a problem given almost exclusively to men. The influence of woman is predominant in domestic architecture as every architect knows. The commercial architecture of Chicago leads the world, but a similar statement can hardly be made for our domestic building, in spite of many excellent examples. Chicago suffers much from the fact that so few people own their homes. The appearance of the streets where cheap houses have been built for purposes of revenue only can not be blamed to women. They are business enterprises governed by men, but the appearance of houses on the best streets is largely determined by women's taste. Have they appreciated their civic responsibility? In going about the streets of Chicago a strong tendency toward the repetition of a given type is noticed. In earlier days the houses were almost all furnished with arched windows, which, repeated ad infinitum, gave a pop-eyed expression to all Chicago. I have sometimes wished as I have passed rows of such dwellings that I could take the original house that set this fashion about the city and give it an object lesson in the force of example.

Are we not in this more enlightened decade doing the same thing on a grander scale? One of the first principles of architectural design is sincerity, and yet do we not find row after row of brick houses masquerading behind ornate stone fronts? As yet, architecturally speaking, we black only the toes of our boots, and do not as a city appreciate the beauty of sincerity. Perhaps this kind of pretentiousness is the most serious fault of our finer dwellings. To be observed, it is now necessary to be plain. Towers and turrets, pillars and pilasters, gables and bays have so fought for the attention of the observer that the inevitable reaction has set in, and the best houses are austerely plain. It is good to reflect that every really good building immediately attacks the whole street and starts an impulse which will eventually lift the neighborhood to an equal standard. We have many beautiful, dignified and stately houses in Chicago which will in time perceptibly leaven her architectural lumpiness. When we school ourselves to require the simple principles of sincerity, fitness to purpose, proportion and expression in our houses, we shall have taken a long step toward civic beauty. Above all things, let nothing tempt us to sacrifice homelike, domestic expression to money display. Chicago is at a great disadvantage, in common with other places, in that the appearance of the city is at the mercy of individual taste. There is no standard beyond the personal. It is now in the power of any Chicagoan to make the whole city ridiculous by the erection of a single building. Those who are familiar with the "Alhambra" on the South Side may think this has already been done. Why should we lay ourselves open to such optical outrages when the means of preventing it are simple? There should be a commission appointed whose duty it should be to inspect the plans and designs for every proposed improvement in the city, and to stamp them with their official approval before building permits could be issued. This commission should consist of a jury of architects and engineers, or other men of expert judgment. All buildings and all public works of art should be passed upon by this committee before they could be thrust upon a helpless public. This commission should be selected not by political preferment, but by vote of the professions themselves. To give the appointing power to the political head of the city would be to lay ourselves open to worse jobbery than we have already received, if that were possible. This plan has already been successfully tried elsewhere, and has proven an effective measure.

Whatever we may fail to learn from the experience of other cities, let us not fail to learn the lessons of our own Exposition. Let us understand the secret of its success. Almost every principle upon which we act in ordinary civic life was there reversed. Every building was designed with reference to every other; every building was a part of a complete whole. The competition system of shopping for plans was abolished, and coöperation was the law of action. Engineers, architects, sculptors and painters, landscape artists and decorators, all combined their best efforts toward one end, and the result was a glorious justification of the methods employed. The World's Fair went far toward proving the competitive system to be the enemy of beauty and toward demonstrating the business wisdom of friendliness. We should do for all Chicago what the World's Fair did to Jackson Park.

Who doubted the commercial value of beauty at the World's Fair? It was its beauty that made it pay. The love of beauty, the sentiment of civic pride, are strong in Chicago, and only wait for the opportunity.

In the Columbian Exposition a triumph was achieved which demonstrated the three principles with which we began this study. Its wonderful beauty was brought about primarily by excellent organization and honest administration. It was due no less to the enlightened industrialism which saw the tremendous value of such a fair, and resolved to give an artistic setting worthy of such a national celebration. In the Columbian Exposition, Chicago has set herself a standard — an ideal, which will be her angel of judgment, and which must some time lift her to her own level. Once awakened to the necessity and to the means, no obstacle will be too great for her indomitable courage to surmount, and she can and will become as beautiful and well governed a city even as Paris.

There never was a paper on any question of reform or progress that did not close with an appeal to the next generation — that poor next generation which is to shoulder all our mistakes, and pass them on to the next generation after. And yet it is true that the hope of any great movement lies in our public education. It

is necessary to inspire our children with pride in our civic housekeeping, so that they will do as do the slum children of New York, take interest in helping the white uniformed angels of cleanliness to keep filth out of the streets. It is necessary to train our children to make higher demands than we have known how to make, and so to raise the national standard of artistic production and taste. They must learn to respect not only the art of the picture gallery, but the great art of architecture as well. They must know that peoples who lived long ago made such works of art of their very frying pans that we are glad now to pay large sums to secure them for our museums of art. They will realize that the element of design enters into every constructed thing, from the cathedral to the teacups on our tables, and will know that art is essential to commercial prosperity, and that the commonest material may be indefinitely increased in value by the magic touch of art. They will then appreciate the value of trained imagination and of discriminating taste, and will realize the necessity of some standard other than private taste for everything which the public eye must see. They will realize the wastefulness of ugliness and the economy of beauty, and for every reason will foster the art spirit as their most valued possession.

Only as we come to realize the universality of the application of design to the commercial and industrial side of life, and the practical as well as the spiritual value of beauty, shall we maintain a position of civic preëminence in the eyes of the world.

ARCHITECTURAL INSTRUCTION.

LAWRENCE SCIENTIFIC SCHOOL.

AS supplementary to the "Architectural Instruction Number" of August, some interesting matter along the same line is here given, which is gleaned from the recently issued announcement of the architectural department of Lawrence Scientific School, affiliating with Harvard University. A feature of special interest is the fact that while a four years' course is provided for, the time limit is not arbitrarily fixed, and a student may complete the course in three, or even two years, if some of the professional studies have been anticipated before entrance:

The Department of Architecture has the great advantage of being closely allied to the department of Fine Arts of Harvard College, and through the intimate connection of the Lawrence Scientific School with Harvard College (both of which are united under the Faculty of Arts and Sciences), of being able to draw upon the college courses as far as may be desirable. On the other hand, the Scientific School itself affords the solid basis of practical training upon which the study of architecture as a profession must rest.

The instruction offered in this department is intended to afford the preliminary technical training required for the practice of architecture. As all such school training must be supplemented by practical experience in an architect's office, students are advised during their period of study to devote a portion of their summer vacation to that work. In grouping the courses it has been recognized that architecture is essentially a fine art, the practice of which must be based on a thorough knowledge of construction. Great stress has therefore been laid on continued practice in design and drawing, and thorough instruction in the history and principles of the fine art of architecture and the arts allied with it. Such knowledge as can be better and more rapidly acquired by actual office experience will only be touched upon in a general way in order to leave more time for subjects which can be adequately taught only in an architectural school. The course is so arranged that professional studies begin in the first year and are continued through four years. In the first year the history of ancient architecture is taken up in such a way as to give the student a familiarity with classic form which shall serve as a basis for the subsequent practice in original design which continues through the whole of the following three years. The aim is to give students such a knowledge of the history of architecture and of the growth and meaning of architectural forms as may enable them ultimately to use precedent not blindly, but intelligently and with some freedom. The history of architecture (with practice in drawing its various forms) is continued through the second year and completed in the third. Courses are included in the general history of the fine arts which enable the student to understand the relation of architecture to the other arts and the relation of the art of different periods to their social and political life, without which knowledge the architect is not likely to use the forms of his art in an intelligent and scholarly manner.

The study of design is pursued mainly by means of problems and criticisms. In addition to the regular staff of instructors, the committee appointed by the board of overseers takes part in the instruction in design, in the advanced work of the third year. Each member of the committee in turn has charge of a problem, discussing with the class the conditions when it is given out, and a week later criticising the preliminary sketches. The final drawings having been made by the students under the direction of the regular instructors, the final criticism is given by the visiting member of the committee. This method of work has proved especially valuable and stimulating.

With regard to construction, a thorough and broad general knowledge of principles and their application to modern work is insisted upon rather than a minute consideration of constructive details. So much of mathematics is taught as is necessary to this knowledge and to the exigencies of actual office practice. The mathematics required is completed in the first year. In the second year mechanics and strength of materials is taken up, and building construction in the third. In the third and fourth years lectures will be given on professional practice, heating and ventilation and sanitary engineering. Students are advised to take the summer course in surveying during some part of their course.

The latter half of the fourth year is devoted to the preparation of a thesis. The subject of this thesis must be decided upon in consultation with the instructors of the department at the beginning of the year. The thesis may consist of either (1) an original design for some architectural work, or (2) a series of drawings illustrative of some important architectural monument of the past. In either case it must be accompanied by a written essay considering the design, or the monument, æsthetically, and in the second case historically. The essay must also consider the constructive principles involved in the design, and give calculations concerning the more important structural parts.

The department possesses a good collection of architectural casts, photographs and drawings, which will be added to from time to time. In addition to this, the collections of the fine arts department in the Fogg Art Museum of the University, consisting of casts, photographs, diagrams and drawings, and the casts and photographs of Assyrian, Persian and Roman work in the Semitic collection in the Peabody Museum, are available and are always open to students.

The University Library at Gore Hall contains a very complete collection of books on architecture and the fine arts, and the department itself possesses a carefully selected working library, which is placed in a room adjoining the architectural drawing-room, where books may be freely consulted by students.

The drawing-room is open to students from 9 A.M. to 6 P.M., and from 7:30 P.M. to 9 P.M., and an instructor is usually present from 9 A.M. to 4 P.M.

Facilities will be given for graduate work in architecture, and students who can do so are advised to extend their period of school training by one or more years of graduate study. The four years that has been allotted usually, in this country, to such training, is a much shorter time than is given in the great schools of art in Europe, or than might with advantage be devoted to academic training in architecture.

The courses in architecture have been arranged primarily to meet the needs of students in the scientific school, who are taking the technical four years' course. All of these courses are open also to students in the college who are fitted to profit by them, and the courses on the history of architecture (1*a*, 1*b*, 1*c*) may be counted toward the degree of A. B.

Students in the college intending, after graduation, to take up the study of architecture professionally, are advised to arrange their college course in such a way as to provide a foundation for their professional studies. Besides taking the courses in fine arts, such students are recommended to study the history of Greece and Rome, the Middle Ages and the Renaissance. They might also with advantage take such courses in classical philology as have a bearing on the history of art, and it is important that they should acquire a knowledge of French and German, as the best works on architecture are in these languages. Some mathematical courses should also form part of such a plan of general education intended to serve as a foundation for the subsequent technical study of architecture. The mathematics required in the four years' course in architecture might in this way be anticipated. The instructors in architecture will be glad to advise with students who intend to plan such a course.

If the college course is carefully planned with that end in view, it will be possible to graduate in architecture in three years after taking the academic degree, or even in two years if some of the professional studies have been anticipated.

The work of the architect requires not only a technical knowledge of building processes and familiarity with architectural form, its history and use, but it demands wide intellectual sympathy, cultivated taste and trained imagination. Such training and cultivation can most readily be obtained — or the impulse leading to it can best be given — by a carefully arranged college course. Those who intend to pursue architecture as a profession are therefore strongly advised to take, if possible, a full college course before beginning their technical studies.

ALMOST every kind of material for use in the construction of buildings, and nearly every imaginable variety of goods for architectural decorative work, are included in the list of exhibits that will be shown in these lines at the National Export Exposition at Philadelphia this fall. The list is a long one — in fact, one of the longest, if not the very longest of any of the special lines. The amount of floor space covered by the showing of goods relating to architecture and building, alone runs well up toward 20,000 feet: not including the exhibit of glass manufacture, which will be carried on in a special building constructed for the purpose, standing on the Amusement Esplanade, leading from the gateway of the grounds to the entrance of the main building.

CONDUITS FOR ELECTRIC WIRES IN BUILDINGS.

THE question of providing in large office buildings a means of taking care of the electric wires in their passage from floor to floor and from room to room, has come to be an important one. Wiring for electric lights can be done practically in a permanent manner, being laid out by the architects before the building is constructed, and a studied plan adhered to. Such wires are now running in some form of conduit. The iron pipe system is perhaps preferable, being entirely fireproof, easy of application and flexible enough for all ordinary purposes.

Telephone, telegraph, ticker, bell wires, etc., can not, however, be laid out in advance, as the requirements of future occupants of offices in respect to such service can not be foreseen, and each occupant is liable to want something different from that which his predecessor had. To reach all parts of a room with invisible wiring, and at the same time avoid tearing up floors whenever an installation or a change is desired, small wooden troughs have been used in the new building of the Chicago Telephone Company, now in the course of erection. These are placed immediately under the floors every four or five feet and running entirely across the room. At the ends of these troughs means are provided for bringing up the wires, which can also be reached at any point out in the room by boring a hole into the floor.

Connecting with the ends of these troughs molding is provided around the base of the walls in which the wires can be carried, and which can readily be removed, thus uncovering the entrances to the wire ducts. To take the vertical wire-runs, a conduit is placed in a shaft of the building and openings arranged on each floor. The course of a circuit, then, is through this conduit to the desired floor, thence through the floor molding to the proper room, and on through the molding and floor conduit to the desired location in the room.

This provides an accessible conduit which will enable wiremen to reach a desk at any point in the room in a ready manner, and when placed before the floors are laid, is, perhaps, the cheapest form of conduit which can be used.

In the new Marshall Field building, where tile floors are to be laid, tin pipes are to be imbedded in the cement filling every four feet across each room. An outlet will be provided at each end of these pipes along the walls, and if necessary they can be reached at any point in the room by drilling through a tile under any desk which the occupant may desire to reach with electric service. Architects and owners will do well to remember that the provision of such inexpensive conduit will save largely in subsequent wear and tear of the floors and walls of the building.

PAINTS IN ARCHITECTURE.—VIII.

A ROUGH AND READY GAUGE OF DURABILITY.

MR. M. F. LINDSAY, of the Santa Fe Railroad, in a comprehensive treatise on the protective value of paints, published in the *Railroad Car Journal* during 1897-98, says: "Of two paints of equal consistency, containing pigments equally good chemically, the one containing the greater percentage of oil to the gallon will dry more slowly, remain elastic for a longer time, and be more durable; provided, however, that the same kind and quality of oil is used in both and no driers are added other than those the oil may have contained."

This summing up of facts by a well-known practical (and theoretical) painter, of long and varied experience, is merely confirmatory of the conclusions previously reached by such authorities as Andés, Spennrath and others; but it is worth noting that, the axiom being accepted, it furnishes a rough and ready means of estimating the probable durability of any paint in comparison with another.

Of course the chemical reaction of some of the pigments (white lead, for example) with linseed oil reduces the ratio of durability for such pigments; but even for them the rule holds good in a general way. We know, for instance, that lampblack and oil form one of the most durable paints that can be produced, and we know that when ready for application it will contain something like five hundred per cent by weight of oil; the proportions for ochers, oxides, umbers, mineral browns, etc., are also comparatively large, and such paints we know are very durable. When we come to the white pigments we find the proportions lower. Zinc white and white lead are the only two white pigments available for use without additions. But of these zinc requires about seventy-five per cent of oil, and lead about forty-five per cent, to fit them for the brush. The superior durability of the zinc is well known, and to its greater oil-carrying capacity is largely to be credited this advantage, though the saponifying action of the oxyhydrate in the white lead, which is rendered active by moisture, is partly responsible for the inferior durability of the lead.

Some sample board experiments made by me during the past two years have served to confirm Mr. Lindsay's assertion. The paints were compounded as follows: 1. Zinc white, 100 lbs., linseed oil 75.44 lbs.; 2. White lead 100 lbs., linseed oil 44.93 lbs.; 3. Lead 50 lbs., zinc 50 lbs., oil 61.3 lbs.; 4. Lead 50 lbs., barytes 50 lbs., oil 38.88 lbs.; 5. Zinc 50 lbs., barytes 50 lbs., oil 61.3 lbs.; 6. Lead, 33⅓ lbs., zinc, 33⅓ lbs., barytes, 33⅓ lbs., oil, 55.03 lbs. Pure raw oil was used in all these formulas, and three coats were applied to white pine boards, which have been exposed to the weather ever since. Thus far the wearing qualities appear to be directly proportional to the percentage of oil in each case.

I would suggest, then, that if we know the oil-carrying capacity of any given paint and are assured that only pure oil is used in it, we can estimate its comparative durability with sufficient accuracy for all practical purposes, the accuracy of our conclusions being modified only by the relative chemical stability of the pigments used.

CHARLES JOURDAIN.

CHICAGO MANUAL TRAINING SCHOOL.

THIS school in its recently issued pamphlet, showing the drawings and shopwork of its pupils for the past year, certainly adds convincing testimony to its efficiency. Established in 1883, it has gone steadily forward and the results of carefully planned effort is plainly shown. For years it has been an almost constant criticism that our system of education failed to develop the heart and hand in proportion to the expanding intellect. Indeed, stronger than this criticism, followed denunciation of a system of education so one-sided. For the last decade, however, important and satisfactory advances have been made. First, the employment of night or day classes for special instruction in manual training. The kindergarten, in its practical application for young children followed, and this later by thoroughly equipped training schools, of which a leading exponent is the one above mentioned. The illustrations given in the yearly catalogue of the products of the pupils of this school indicate that the term "Manual Training" is too narrow to cover the scope of the work. The eye certainly has been disciplined as well as the hand, and it is highly improbable that this work has been accomplished without a corresponding development of artistic taste. In fact, the results as indicated in the published illustrations confirm this fact. The system should be gradually extended to all public schools, as it undoubtedly will be.

NEW PUBLICATIONS.

A MOST artistically prepared book has been issued by Messrs. Westinghouse, Church, Kerr & Co., New York, entitled "Light and Power Installations for Private Residences and Hotels." The finest tinted paper, profuse and original illustrations, and a choice blending of colors combine to present a business publication in a luxurious setting. The pages are illustrated with artistic views of private residences and hotels where electric lighting is provided by Westinghouse gas engines and generators. We note that well-known people have substituted electric lighting for gas and lamps — Mr. Louis Marx, Alexandria Bay, N. Y.; Mr. W. Luttgen, Linden, N. J.; Mr. A. S. Apgar, Ridgefield, Conn.; Mr. George J. Gould, Lakewood, N. J.; The Kirkwood Inn, Scarborough Beach, Maine; Mr. D. Le Roy Dresser, Oyster Bay, N. Y., and many others. We glean from the pages of this interesting book that electric lighting can be supplied in any remote point. The Westinghouse gas engine is a novel invention, specially adapted for electric lighting. Gasoline can be used as fuel when gas is not available. With an electric plant, light is supplied for house, stables and grounds, and also power for operating pumps, elevator service, ventilating fans, lathes, saws, preparing fodder, ice freezers, dairy, laundry and other work connected with private residences and hotels.

ASSOCIATION NOTES.

THE AMERICAN CERAMIC SOCIETY.

The American Ceramic Society held a very successful meeting at Cleveland, July 4. The society holds two meetings each year, that at midwinter being, strictly speaking, the business meeting, and that at midsummer, business with vacation trimmings. A session was held at the Hollenden the evening of July 4, then the morning of the 5th the members went to Put-in-Bay, holding business sessions on the boat going and coming, and thoroughly enjoying the few hours amid the historic surroundings of that resort.

Another business session was held at the Hollenden, and the next day the party went by street car to Cuyahoga Falls and to Akron, where the numerous clay-working industries were visited, and another business session held at the Hotel Buchtel that evening. The next morning, Friday, they went to Barberton, where they were royally entertained, and where the convention broke up in the afternoon.

It was interesting to note the very numerous committee meetings held, and the hard work put in. All parties seemed full of that characteristic zeal that seems an attribute of all true workers in clay. These committees held sessions early and late, reporting on work done and yet to do, and apportioning the future work in lines and in forms, not for their own use, but so that information which they have already enjoyed might be available to others — notably in their proposed Manual of Computation and in their

translation of Sager. A significant fact is that these men who have Sager's works in the original and can read them and need no translation have apportioned the work of translation among themselves, and have stolen time from their busy life to translate hundreds of pages, so that the treasures of that work may be accessible to the large body of American clayworkers to whom they have been locked by being in a strange tongue.

When one compares this spirit to that in the early days of the art, when men were copyists and even feigned idiocy to obtain access to factories and steal secrets, one realizes that the future of this art in America is beyond comprehension, and that the day is at hand when America shall lead the world in claywork.

GLAZING BY ELECTROLYSIS.

PROGRESS in many details of great ideas is apparent by the evidence exhibited in the different departments of architecture. First, our eyes are brought to the notice of the changes in this and that, from the clumsy and heavy show of strength to the delicate lines of refinement with more power and strength than the former. As an example of this your attention is called to the accompanying illustration, in which is shown all the ductility and strength that can possibly be made by nature's arts as applied by human knowledge. It represents a dome of opalescent glass—seven feet wide, with a two-foot rise—forming a perfect section of a sphere, and has been placed in Mr. Harry Selfridge's home at Lake Geneva. The resting place of this work of art is worthily chosen as the cap sheaf in a vestibule of massive Gothic design elaborately carried out in rich carvings. The motif of this

dome is a sunset through a forest, thoroughly Gothic in design. Gothic tracery in deep green at the base, with a background of sunset yellow, represents the sun dying down behind the foliage, the colors gradually dying away toward the apex with a background of yellow and orange. Though only a few colors are mentioned the opalescent glass presents an iridescent radiance of soft glowing tones that makes a description almost impossible.

The glass in this dome of seven feet was bent to fit each in its individual place. Between each piece of glass a thin ribbon of copper is inserted and as the dome is completed it is tightened—the edges of glass pressing against the copper ribbon. The whole dome is then passed through the rapid electrolysis process, copper forming on the original copper ribbons until the required strength is secured. No bracing or strengthening bars are used, as is necessary in leaded glass.

A most magnificent cathedral memorial window is about being finished by this process of glazing for the church of St. Paul. Many other important pieces of work are being accomplished by the Art Glass Department of the American Luxfer Prism Company, with Mr. Henry F. Belcher in charge.

Leaded glass may be appreciated for its association of ancient times, but the refining influences of the present age make this new system of glazing by electrolysis a worthy subject of deep consideration.

MOSAICS.

THE architects selected to design the buildings for the coming Pan-American Exposition at Buffalo are Shepley, Rutan & Coolidge and Peabody & Stearns, of Boston; Babb, Cook & Willard, Carrère & Hastings and Hayward & Caldwell, of New York; George Cary, Esenwein & Johnson and Green & Wicks, of Buffalo.

THE jury composed of American and foreign architects has awarded M. Benard, the Parisian architect, the first prize in the competition sponsored by Mrs. Phoebe Hearst, who offered prizes for the best plans for new buildings for the University of California. The ultimate cost of the improvements will reach into the millions. Mrs. Hearst will defray all of the expenses of the proposed additions to the university. M. Benard will receive a premium of $10,000 for his plans in addition to the customary architect's fees, amounting in the aggregate to a handsome fortune. The other prizes assigned were as follows: Howell, Stokes & Hornbostol, New York, $4,000; Des Pardelles & Codman, Boston, $3,000; Howard & Cauldwell, New York, $2,000; and Lord, Hewlett & Hull, New York, $1,000.

RALPH D. CLEVELAND, of Chicago, will start for a European trip of a year early in October. He goes to make a collection of architectural views. Mr. Cleveland is well fitted for the task. He is a good photographer, and has had ample experience in selecting architectural subjects. His occupation for the last five years as photographer for leading Chicago architects has placed him in a position to know what is demanded. He purposes to make a tour of England and the Continent, and make a collection of at least 1,000 negatives which, to that extent, will cover those bits of interesting architectural details in out-of-the-way places, not at present procurable in any other way. It is not his purpose to duplicate views of the many historical and celebrated buildings of which many excellent photographs are now extant, but rather to make a distinct and original addition. There is no reason why he should not succeed in this laudable ambition, and he doubtless will.

OUR ILLUSTRATIONS.

Staten Island Academy. Lamb & Rich, architects, New York.

Dining Room, Residence, C. E. Gill, Chicago. W. A. Otis, architect.

Residence, C. K. Pittman, Evanston, Illinois. W. A. Otis, architect, Chicago.

Residence, H. H. C. Miller, Evanston, Illinois. W. A. Otis, architect, Chicago.

Cabinet in Dining Room, Residence, C. E. Gill, Chicago. W. A. Otis, architect.

House for H. Walter Webb, Scarborough. R. H. Robertson, architect, New York.

Brownleigh Hall, Wellesley, Massachusetts. Allen & Vance, architects, Boston, Massachusetts.

The Fowler Shops, University of Kansas. Root & Siemens, architects, Kansas City, Missouri.

House for Marshall C. Lefferts, Cedarhurst, Long Island. Lord, Hewlett & Hull, architects, New York.

Elevator Inclosure, Ground Floor, R. G. Dun Building, New York. Geo. Edw. Harding & Gooch, architects.

View in Hall, House for Marshall C. Lefferts, Cedarhurst, Long Island. Lord, Hewlett & Hull, architects, New York.

Interior View of House of H. F. Steere, Nayatt, Rhode Island. Stone, Carpenter & Willson, architects, Providence, Rhode Island.

Accepted Designs for Buildings for West Virginia University: Library, Armory, Mechanical Hall. Wilson Bros. & Co., architects, Philadelphia.

Counter Screen, Solid Bronze; Elevator Inclosure, Electroplated Bronze; R. G. Dun Building, New York. Geo. Edw. Harding & Gooch, architects.

Photogravure Plate: Commercial Building for Hart, Schaffner & Marx, Chicago. Holabird & Roche, architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

The Kenwood Hotel, Chicago. Charles S. Frost, architect.

Station at Geneva, Illinois, for C. & N.-W. R'y. Charles S. Frost, architect.

The Brown Office Building, Rockford, Illinois. Charles S. Frost, architect, Chicago.

Views in Residence of Andrew Squire, Cleveland, Ohio. Charles F. Schweinfurth, architect. Four full-page plates are shown, including Stairway, Dining Room, Stairway Hall, etc.

BUILDING OUTLOOK.

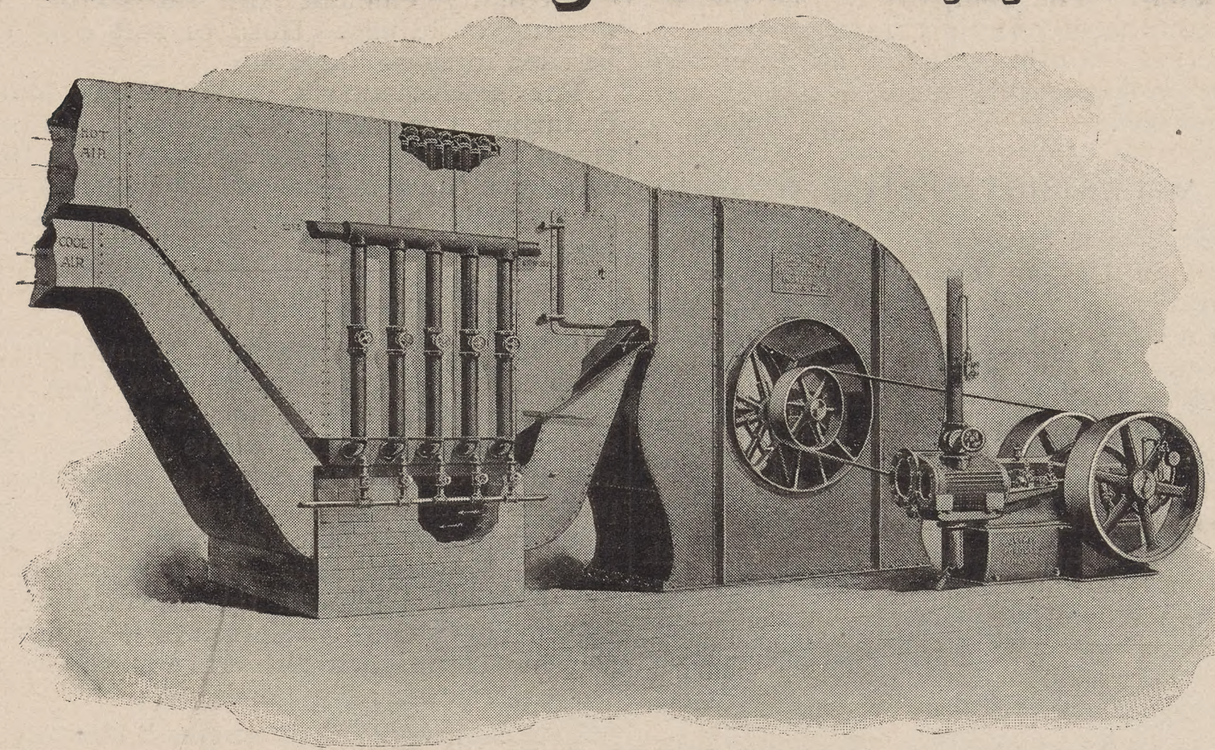
OFFICE OF THE INLAND ARCHITECT,
CHICAGO, September, 1899.

The published reports of building operations in the leading cities of the country tell their own story, and no comments can add to their significance. This only might be said, that if they indicate anything it is that the country has entered on an era of house, shop, factory, mill, warehouse and office building that promises to continue for years. The building operations now in hand in a number of the larger cities are far beyond those of any former year. Inquiries from sources safe to rely upon show that the momentum beneath the surface will carry us into a year of phenomenal activity in 1900. The better condition of the working classes and the prosperous industrial conditions are the broad and enduring basis of existing activity, and the assurance of coming activity. The better housing of the average citizen is the work in hand, and which each average citizen will very largely do for himself. It is to be observed that there is a disposition among capitalists to invest in building enterprises. A great many new industrial centers are springing up, and each one calls for houses. There is a decentralizing tendency at work all around, which will react in favor of the carpenter and contractor and the building trades generally.

There is also an upward tendency in all lines of building material. The highest level has not been reached, and no one can say when it will be. The pressure for material is far beyond capacity. That 1900 will be a very busy year is assured. There is an abundance of money seeking employment, and it will find profitable opportunities in building operations.

We may look forward with confidence. The sheriff will have but little to do for a while, and the bankruptcy courts are not likely to have much to do.

Buffalo Fan System of Heating, Ventilating, Drying and Cooling.



Apparatus arranged for a Double Duct System.

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DIXON'S SILICA GRAPHITE PAINT

FOR TIN OR SHINGLE ROOFS AND IRON WORK. IT IS ABSOLUTELY WITHOUT AN EQUAL. Tin roofs well painted have not required repainting for 10 to 15 years

If you need any paint it will pay you to send for circular.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

Chicago Floor Company

Manufacturers, Jobbers and Layers of

Ornamental Hardwood Floors, Parquetry, Wood Carpet, Grilles.

132 WABASH AVENUE (near Madison St. Station),

Telephone, Central 1043. Send for catalogue, free. CHICAGO.

For Butler's Pantry and all other Swing Doors the best device is

THE "BARDSLEY" CHECKING SPRING HINGE

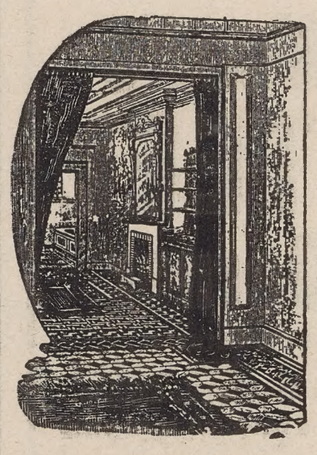
It goes in the sill under the door and works in oil. It closes the door gently and without noise, and stops it at once at the center.

THE "BARDSLEY" WOOD DOOR KNOBS

are undoubtedly the best. They retain their handsome finish, and the heads never come off. Catalogue on application.

JOS. BARDSLEY.

147 to 151 Baxter St., NEW YORK CITY.



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Wood Carpets, Parquet Floors, Rug Borders.

Send for book of designs.

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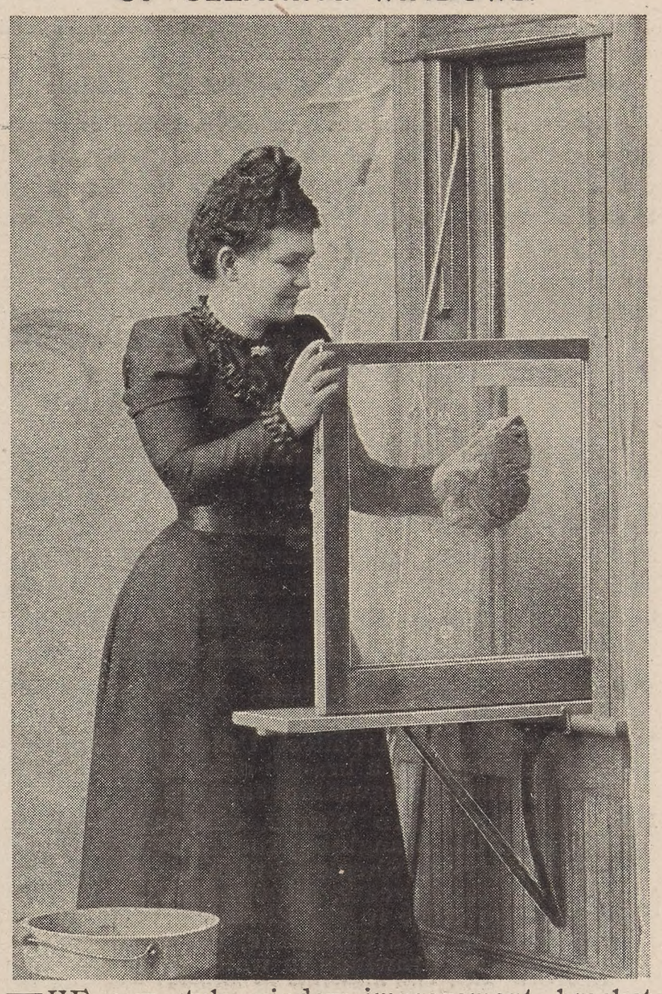
LIGHT DARK INTERIORS.

LUMINOUS PRISM CO.

27-29 South Clinton Street, Chicago.

NEWEST, BEST AND CHEAPEST MODE OF CLEANING WINDOWS.



THE new style window improvement, bracket, shelf and fixtures, above shown, should be placed in each and every window, new or old, so that a housekeeper or janitor can release the sashes from the frame, turn them into the room on the shelf, as illustrated, wash and polish the glass like a mirror, and return them to their places without any change that hinders them from moving in their old grooves the same as before, and with absolutely no risk of life or limb. Cost for ordinary window does *not exceed 50 cents.*

Architects and all interested are invited to call and see a full-size model in operation at No. 159 La Salle St., National Life Building, Room 9.

J. I. BROWN.

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Photographic Supplies for Architects and Draftsmen.

92 State Street, CHICAGO.

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ILLINOIS CENTRAL — CENTRAL MISSISSIPPI VALLEY ROUTE — RAILROAD

Runs Two Solid Vestibuled Trains Daily

DIAMOND SPECIAL NIGHT TRAIN

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between Chicago and St. Louis.

Free Reclining Chair Cars, Parlor-Café Cars, Pullman Buffet Open and Compartment Sleeping Cars. See that your ticket between Chicago and St. Louis **Reads via Illinois Central Railroad.** It can be obtained of your local ticket agent.

A. H. HANSON, G. P. A., Ill. Cent. R. R., Chicago, Ill.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXXIV. ADVERTISERS' TRADE SUPPLEMENT. No. 2

Valuable Publications Free.

Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

REQUESTS FOR CATALOGUES AND SAMPLES.

Those wishing catalogues and samples sent them by dealers in general may have their names inserted under this heading free of charge. The only recompense desired is that the dealers who send catalogues to these addresses give THE INLAND ARCHITECT due credit for business benefits that result.

WILLETT S. SCULL, Architect, 792 Broad street, Newark, N. J.

MORRISON H. VAIL, Architect, Unity building, Chicago, has opened a branch office at Dixon, Ill., and desires catalogues and samples.

MR. JOHN STAFFORD WHITE, who has been in charge of the draughting room of the St. Louis office of Messrs. Shepley, Rutan & Coolidge, for the past three years, announces that he has opened an office in the Chemical building for the practice of architecture, the rendering of architectural drawings in water color and pen and ink, and the making of special designs for furniture, gas fixtures, etc. He will be pleased to receive samples, etc., from the trade.

ARCHITECT, Box 307, Vicksburg, Miss., will be glad to receive catalogues of all classes of building materials.

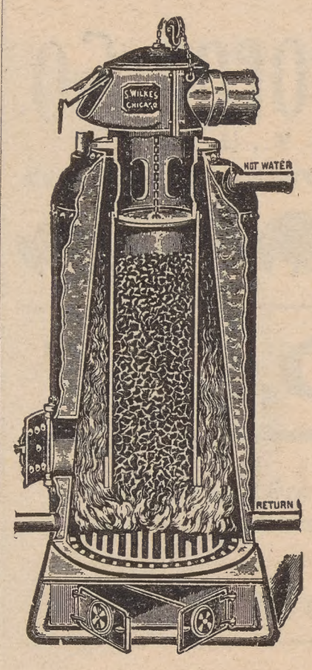
ARCHITECTURAL ORNAMENT.

The Decorators Supply Company, located at the corner of Clinton and Van Buren streets, Chicago, was incorporated under its present management five years ago, and has increased its capacity for the production of ornamental architectural supplies fourfold in that time. This increase is due to the untiring efforts of the members of said firm, coupled with an increase in the demand for this class of goods, the latter due largely to the education of public taste.

Their specialties are relief ornamentations in plaster, cement, composition and wood. These are produced in almost endless variety and suited to all classes of buildings. The company appears to have kept pace with the growing demand for these ornamental details of architectural art, and its published catalogues will demonstrate this fact. Works of ornamentation for beautifying interiors of all classes in buildings are made more artistically and at less expense today than ever before. The company will be pleased to respond to any and all inquiries for their goods, and cordially invite all interested parties to confer with them, either by mail or in person.

THE WILKS HOT-WATER HEATER.

While this is one of the oldest forms of heaters on the market, it still retains its superiority. The advantages of a "vertical" heater are acknowledged by all, as hot water to circulate must rise, and the proper place for this action is in the heater, as there is where the water gets its force. It is further claimed that being strongly constructed of steel they are extremely durable, and the fire has more direct action on the water than where the heat must pass through thick plates or tubes of cast iron; also they can not crack by expansion and contraction, as in sectional boilers. The magazine feed is a great improvement, as it can be filled once or twice in twenty-four hours, requiring much less care to keep a steady fire, besides being more economical in fuel and attention. The construction of the magazine is superior, having openings all around. At the top there is an equal combustion and consequent heating capacity all around the inside of the heater, allowing all the gas to be consumed or pass up the flue instead of out into the room. They require no brick setting, but are complete in themselves; can be easily and cheaply covered with asbestos or other coverings when desired, and occupy but little space in comparison to their heating capacity.



These heaters have been thoroughly tested in the past as to their good qualities, both for house heating and supplying hot water in all quantities. They are made in all sizes from 10 inches in diameter to 4 feet. They are known and used all over the country for supplying hot water for hotels, apartment buildings, bathhouses, residences, etc., and are equally efficient and satisfactory for heating buildings. Hard or soft coal can be used in these heaters.

The manufacturers, the S. Wilks Manufacturing Company, 51-53 South Clinton street, Chicago, will be glad to send their catalogue and answer any inquiries, etc., giving full information as to right sizes to use, etc.

TRADE NOTES.

THE Acetylene Apparatus Manufacturing Company, of 141 Broadway, New York City, is sending out warning notices to the public against infringing any of its patents. The company claims to own the fundamental patents covering the construction and operation of practicable acetylene gas machines, and expresses a determination to protect their rights in the courts, if necessary. The warning referred to is embodied in the company's advertisement, which appears elsewhere in this issue.

THE Kenney "Flushometer," that ingenious little mechanical appliance for flushing water closets, and which effectually dispenses with the noisy and dirty overhead tank, has in competition with other devices for the same purpose, carried off the palm with William Cramp & Sons, Philadelphia, Pennsylvania, and the Morse Iron Works, New York City. The former installed seventy-seven Kenney "Flushometers" on the United States transport Thomas, and the latter sixty on the transport Logan. The Kenney Company, manufacturers of this device, are located at 72-74 Trinity Place, New York City.

SIMPSON BROTHERS COMPANY, Chamber of Commerce building, Chicago, claim to have solved the problem of concrete walks and pavements. The most expensive walk or pavement of this kind is the poor one, or, in other words, the cheap one. Paradoxical as this may appear, it is nevertheless true. First-class material is the first consideration, and to this must be added experienced and skilled workmen. The two elements combined should secure satisfactory results. The firm referred to, whose advertisement appears elsewhere in this issue, have had years of experience and have a reputation for prompt and satisfactory execution of contracts.

Business Chance. Unequaled opportunities here for Americans with brain and cash; will lend every assistance to first-class energetic men. A permanent official position for an experienced business man in a new composition metal industry, at Durango Iron Mountain, is open for engagement.

THE NATIONAL ORE & REDUCTION CO.,
DURANGO, MEXICO.

DURANGO, MEXICO, August 1, 1899.

TO THE SUPERINTENDENT OF THE

FOUNDRY DEPARTMENT.

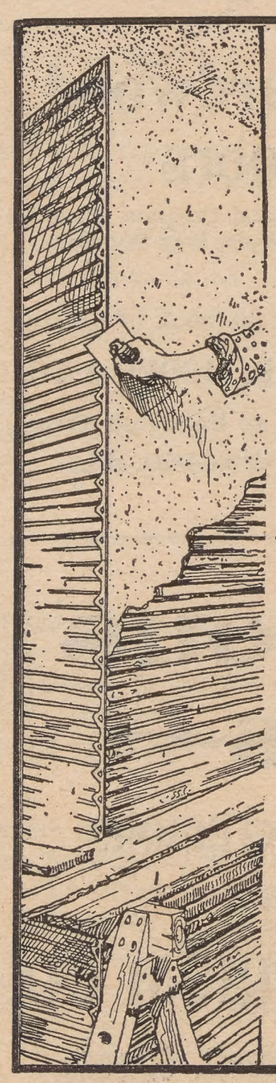
DEAR SIR:—It will give us pleasure and you satisfaction to allow us to express to you a sample keg of hundred kilos of our new Ferro-Nickel Manganese Calcium Fluoride for trial in cupola and ladle use.

This alloy like yeast, not an expensive article, gives new life to the metal in purity, ductility and softness.

Upon receipt of this, please telegraph at once to our exclusive Sole Agents, MESSRS. STAHLKNECHT Y CIA., Bankers, Durango, Mexico, for a trial sample keg alloy, which we will be pleased to forward to you immediately by Wells, Fargo y Co.'s Express direct to your foundry.

Awaiting your immediate reply, we are faithfully your servants.

THE NATIONAL ORE & REDUCTION CO.,
P. O. Box 83. DURANGO, MEXICO.



Wood's STEEL Corner

Keeps the Corners from Breaking
Saves Time while Making.

It is a patented steel strip that is fastened to lath, or other construction, on projecting corners, is embedded in the plaster and prevents it chipping.

It does a great deal more, but our book, "Just Around the Corner," tells the rest. Send for it. A sample, too, for the asking.

Cheap enough for any Building
Good enough for every Building

It costs less to put Wood's Steel Corner in a building than to keep the corners repaired.

GARA, McGINLEY & CO.,
Sole Manufacturers,
Philadelphia, Pa.
Agents with stock in most of the large cities.

ARCHITECTS, BUILDERS AND THE PUBLIC

APPRECIATE THE

Fast Train Service

VIA

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"Big Four" Route.

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THE SCENIC LINE TO

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Via the

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BUILDERS' HARDWARE,

ART METAL WORK OF ALL KINDS,

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Our stock is large and carefully selected. The assortment includes, besides all the standard lines, the NEWEST and BEST goods of ALL THE LEADING MAKERS.

SOLE OWNERS OF

Skidmore's Patent Adjustable Window Balcony

and Simkins' Patent Window-Cleaners' Safety Belt

(For Cleaning the Outside of Windows of High Buildings),

The very best and the cheapest devices for this purpose. Send for circulars and estimates.

NOTICE OUR NEW LOCATION. Our stores are 180 feet deep on Randolph Street and 80 feet on State Street. We occupy six floors with every facility for showing and handling goods.

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Telephone, Express 551 and 554.

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SAMSON SPOT CORD

You can tell at a glance that no other Sash Cord is substituted. It is warranted to be of the best cotton stock, smooth finish and perfect braid.

SAMSON CORDAGE WORKS

BOSTON, MASS.

On very pale hardwood

or for delicate tinted enamels, a specially made pale varnish is needed. In such cases specify **I. X. L. No. 2** for interior woodwork and interiors of public and private buildings, etc. It is made from the hardest selected gums, and will retain its beauty and brilliancy without deterioration for many years. It is free working, waterproof, and can be rubbed to a dead finish in from three to four days, and very pale in color. **Other Varnishes for other purposes.**

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GATES & RANDOLPH, 13 Monadnock Bldg., CHICAGO, ILL.

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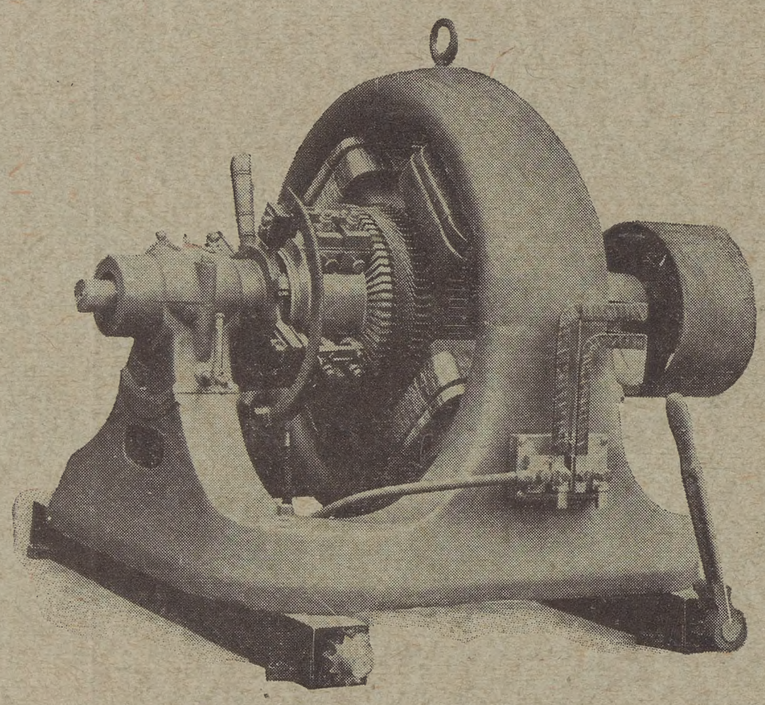
Long-Burning.



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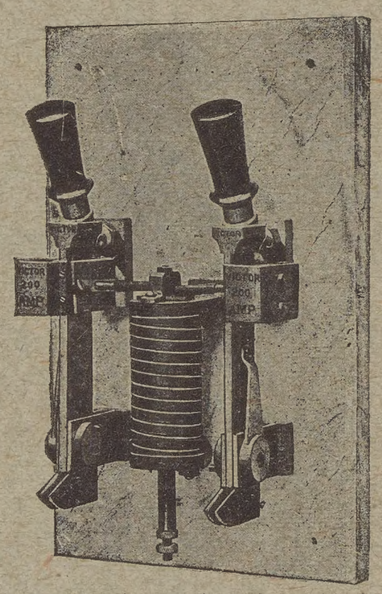

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